S. HRG. 99-1049

AIRLINE SAFETY

HEARINGS

BEFORE THE

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

OF THE

COMMITTEE ON GOVERNMENTAL AFFAIRS UNITED STATES SENATE

NINETY-NINTH CONGRESS

SECOND SESSION

MARCH 6, 13, 1986

Printed for the use of the Committee on Governmental Affairs

U.S. GOVERNMENT PRINTING OFFICE
67-661 WASHINGTON : 1987

For sale by the Superintendent of Documents, Congression ffice
U.S. Government Printing Office, Washington, DC 20402

S401-28

COMMITTEE ON GOVERNMENTAL AFFAIRS

WILLIAM V. ROTH, Jr., Delaware, *Chairman*

TED STEVENS, Alaska
CHARLES McC. MATHIAS, Jr., Maryland
WILLIAM S. COHEN, Maine
DAVE DURENBERGER, Minnesota
WARREN B. RUDMAN, New Hampshire
THAD COCHRAN, Mississippi

THOMAS F. EAGLETON, Missouri
LAWTON CHILES, Florida
SAM NUNN, Georgia
JOHN GLENN, Ohio
CARL LEVIN, Michigan
ALBERT GORE, Jr., Tennessee

Franklin G. Polk, *Chief Counsel and Staff Director*
Margaret P. Crenshaw, *Minority Staff Director*

Permanent Subcommittee on Investigations

WILLIAM V. ROTH, Jr., Delaware, *Chairman*
WARREN B. RUDMAN, New Hampshire, *Vice Chairman*

CHARLES McC. MATHIAS, Jr., Maryland
WILLIAM S. COHEN, Maine
THAD COCHRAN, Mississippi
TED STEVENS, Alaska

SAM NUNN, Georgia
LAWTON CHILES, Florida
JOHN GLENN, Ohio
CARL LEVIN, Michigan
ALBERT GORE, Jr., Tennessee

Daniel F. Rinzel, *Chief Counsel*
Eleanor J. Hill, *Chief Counsel to the Minority*

CONTENTS

Opening statements: Page
- Senator Roth 1, 113
- Senator Nunn 3, 114
- Senator Glenn 4, 116
- Senator Gore 7, 119
- Senator Chiles 7, 120

WITNESSES

THURSDAY, MARCH 6, 1986

Hon. Paul Simon, U.S. Senator from the State of Illinois 9
Daniel E. Hood and Michael Sanjenis, former Arrow Air pilots; and George Lycan, pilots, Rich International Airways 21
George Batchelor, chairman, Arrow Air, accompanied by Tom Connaughton; and Richard Skully, senior vice president, operations and maintenance 68

THURSDAY, MARCH 13, 1986

James E. Alley, Jr., retired FAA inspector and Harry A. Langdon, retired FAA inspector 123
Melvin F. Derry, task force member to evaluate NATI inspection reports 163
Anthony J. Broderick, Associate Administrator for Aviation Standards, Federal Aviation Administration 184

ALPHABETICAL LIST OF WITNESSES

Alley, James E., Jr.:
- Testimony 123
- Prepared statement 154

Batchelor, George:
- Testimony 68
- Prepared statement with an attachment 96

Broderick, Anthony J.:
- Testimony 184
- FAA responses to written questions 219

Derry, Melvin F.:
- Testimony 163
- Prepared statement with an attachment 172

Hood, Daniel E.:
- Testimony 21
- Prepared statement 53

Langdon, Harry A.:
- Testimony 123
- Prepared statement 157

Lycan, George:
- Testimony 21
- Prepared statement 64

Sanjenis, Michael:
- Testimony 21
- Prepared statement 57

Simon, Hon. Paul:
- Testimony 9
- Prepared statement with attachments 11

Page
Skully, Richard:
    Testimony 68
    Prepared statement 105

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

Letter to the Permanent Subcommittee on Investigations from Albert B. Randall, Assistant Chief Counsel for Litigation, Federal Aviation Administration, July 14, 1986 198
Responses to written questions submitted by the Federal Aviation Administration 219
Statement of Clark H. Onstad, vice president, governmental affairs, Continental Airlines 244
Affidavits from:
    William T. Gates 254
    Merle Hottenstein 261
    Alva M. McCrory 271
    Brian J. Vincent 275

EXHIBITS

	Introduced on page	Appears on page
1. Responses of Universal Flight to written questions submitted by Senator Gore	20	*
2. FAA Ramp inspection report	37	281
3. Sanjenis' flying records and qualifications	41	285
4. Letter from Stuart Goldstein to Susan Lebeaux, January 7, 1986	52	300
5. FAA special inspection report, concerning Arrow Air, Inc., February 21, 1986	74	301
6. Preliminary response of Arrow Air to special inspection report, March 6, 1986	74	344
7. List of the 43 airlines that received NATI phase II indepth inspections excerpted from the "National Air Transportation Inspection Program," Federal Aviation Administration, March 4, 1984–June 5, 1984, report for the Secretary	79	352
8. FAA investigative reports for 1982	80	*
9. National Transportation Safety Board preliminary report of aviation incident	82	354
10. FAA memorandum regarding responsibility for acceptance of overhaul records, December 3, 1985	86	356
11. FAA advisory circular	90	*
12. Information concerning inspection of Continental Airlines	129	357
13. Continental's policy regarding their check airman	129	362
14. Original version of check airman finding and altered version	131	364
15. Letter to Secretary of Transportation Dole from Henry A. Langdon, January 5, 1985	132	368
16. Letter to Harry A. Langdon from Anthony J. Broderick, February 8, 1985	132	371
17. Letter to Donald Engen from Harry A. Langdon, June 21, 1985	132	374
18. En route inspection report on Pan American, August 10, 1983	137	376
19. En route inspection report on Pan American, March 3, 1986	137	378
20. Letter to Donald D. Engen, from Representatives Cardiss Collins and Raymond J. McGrath, December 7, 1984	192	384

---

*Exhibits have been retained in subcommittee files.

AIRLINE SAFETY

THURSDAY, MARCH 6, 1986

U.S. SENATE,
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS,
COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, DC.

The subcommittee met at 9:30 a.m., in room SD-342, Dirksen Senate Office Building, under authority of Senate Resolution 353, section 13, dated March 13, 1986. Hon. William V. Roth, Jr. (chairman of the subcommittee) presiding.

Members of the subcommittee present: Senator William V. Roth, Jr., Republican, Delaware; Senator Thad Cochran, Republican, Mississippi; Senator Lawton Chiles, Democrat, Florida; Senator Sam Nunn, Democrat, Georgia; Senator John Glenn, Democrat, Ohio; Senator Carl Levin, Democrat, Michigan; and Senator Albert Gore, Jr., Democrat, Tennessee.

Members of the professional staff present: Daniel F. Rinzel, chief counsel; Eleanore J. Hill, chief counsel to the minority; Katherine Bidden, chief clerk; Mary Robertson, assistant chief clerk, minority; Barbara Kammerman, deputy chief counsel; Susan Lebeaux, staff counsel; Mary Vinson, staff investigator; Sally Cribbs, executive assistant to the chief counsel; Carla Martin, secretary; Candis Mitchell, secretary; Paul Barbadoro, staff counsel; Charlie Osolin, press secretary; John Sopko, assistant counsel, minority; and Lenny Willis, minority investigator.

[Senators present at the start of the hearing: Roth, Glenn, and Gore.]

OPENING STATEMENT OF SENATOR ROTH

Chairman **ROTH**. The subcommittee will please be in order.

Over the past several months, the American public has heard repeated reports of aircraft accidents and incidents. In terms of the number of fatal accidents and loss of life, 1985 was one of the deadliest years in the history of U.S. commercial aviation. It is true and I think it is important to understand that on a passenger-mile basis, air travel is still the safest way to go.

But I, for one, don't believe that body count is the only measure of airline safety. The question must be asked: Have we become a nation of unfriendly skies? When we see evidence of increased near misses, poor maintenance and lack of adequate enforcement of safety regulation, the American public has a right to be concerned. We must correct these problems before—and I emphasize the word "before"—accidents happen.

At the recommendation of Senator John Glenn, who, of course, is a distinguished member of the Permanent Subcommittee on Investigations, the subcommittee has undertaken a probe into the current state of U.S. air safety.

The Airline Deregulation Act of 1978 brought about many changes in the industry, many of them positive. An explosive growth in carriers meant more routes and lower fares for consumers. But it also meant more work for the FAA in the form of certifying and keeping up with the new influx of carriers.

I am a strong supporter of deregulation. But I have not forgotten the promise of Congress to the American public to do everything in its power to keep the skies safe. I say unequivocally that Congress did not deregulate airline safety. In fact, deregulation requires more emphasis on safety.

We recognize, of course, that the FAA cannot be everywhere at every moment. In large measure, the responsibility for safety of the airline industry must be shared by airline owners, airline personnel, aircraft manufacturers, concerned industry groups, as well as others. The National Transportation Safety Board, an independent agency, also has significant responsibilities to ensure air safety.

Too often, we hear that each of the players on this team plays a reactive role, that it takes an aircraft accident to elicit a swift response by the responsible agencies and others to problems that should have been obvious. The American public has a right to expect something better than "tombstone safety", by that I mean an interest in safety paid for with blood. That something must be a constant emphasis on prevention, on stopping potentially hazardous conditions today before they become tomorrow's glaring, and often tragic headlines. We simply must not allow air safety to take a nose dive.

On that subject, we hear lots of reports of wrongdoing after the fact, after the accident. I understand there is a program under which, in certain instances, pilots and others are permitted to report problems they may have contributed to and still avoid sanctions. However, this program, standing alone, cannot effectively secure all the necessary information to protect the flying public before hazards or accidents occur. We want to know what more can be done to secure such vital informaton in time to prevent the consequences of unsafe conditions.

At a second hearing scheduled for March 13, 1986, we will be asking the Federal Aviation Administration this question and others concerning its role in performing safety surveillance of the airline industry.

Today. we will hear from the distringuished Senator from Illinois, Mr. Simon, who will address the way in which new innovative technology can improve the safety of our aircraft.

Other witnesses will provide some perspective on the types of problems that are affecting the industry. In the wake of the crash of the Arrow Air, Inc., DC-8 in Gander, NF, on December 12 of last year, in which 256 people lost their lives, the subcommittee's investigators spoke to a number of former Arrow Air pilots concerning their experiences at that airline. You will hear from some of these pilots today, as well as representatives from Arrow Air.

I want to make it very clear that we have not determined the cause of the air crash. The air crash is under investigation by Canadian authorities, and the final results of that investigation are not yet known.

We will also hear today from a Rich International Airways pilot about his experiences at that airline. I want to commend the pilots who are testifying today and make it clear that I do not expect they will be subject to adverse consequences from the Federal Aviation Administration or others as a result of their testimony.

I also want to make it clear that we are not suggesting today that any of the problems which may affect or have affected Arrow Air or Rich International Airways are peculiar only to those airlines. Unfortunately, the subcommittee's investigation to date suggests that this is certainly not the case. In fact, The Federal Aviation Administration cited several major carriers last year for violations of safety regulations.

It is my fervent hope that the tragedies of the past year in airline operations will not repeat themselves in the future, that the Federal Aviation Administration and other members of the airline industry will work continuously to make airline travel safer, with the emphasis on prevention and constant vigilance. There can be no supersaver on the flight to achieve air safety. The American public expect and deserve a first class ticket to fly our "safe" and "friendly" skies.

[At this point, Senator Chiles entered the hearing room.]

Chairman ROTH. It is my hope that the tragedies of the past year in airline operations will not repeat themselves in the future; that the FAA and other members of the airline industry will work continuously to make airline travel safer, with the emphasis on prevention and constant vigilance. There can be no supersaver on the flight to achieve air safety. The American public expect and deserve a first-class ticket to fly our safe and friendly skies.

We will follow the early bird rule and call on Senator Glenn.

Senator GLENN. Thank you very much, Mr. Chairman. Before I make a brief statement here, I would like to say that Senator Nunn, who is our ranking minority member, is tied up also as ranking minority member in the Armed Services Committee. He will be here as soon as he can. They are involved with all the Defense reorganization, the final vote-out of that this morning. I just came from that meeting so I could be here, and Sam wanted me to ask unanimous consent to put his opening statement in the record, and he will be here as soon as he can this morning.

Chairman ROTH. Without objection, so ordered.

[Senator Nunn's opening statement follows:]

OPENING STATEMENT OF SENATOR NUNN

Mr. Chairman, this morning the Subcommittee turns to an issue which all of us, as citizens of a increasingly mobile society, can directly relate to: the question of aviation safety. There are very few Americans who have not used the services of commercial airlines for their own travel or for that of their loved ones. Prior to last year's tragic record of airline fatalities, I would guess that most Americans had little doubt that the airline industry in this country maintained the very highest safety standards, as enforced by the Federal government through the FAA. We had been told, and I am sure most believed, that we were safer when riding a commercial jetliner than when driving an automobile in our local neighborhoods.

In that context, last year's sobering list of fatal air accidents sent a virtual shock wave through the complacency that had come to surround the public's view of air safety standards. I thnk we have all become a bit more aware of the need for adequate safety regulations and effective enforcement of those regulations within the airline industry. In the wake of last year's tragic events, the public, and we in Congress, must turn to the FAA, and to the industry which it regulates, for concrete assurances that everything possible is being done to maintain the highest level of aviation safety.

With that in mind, I was especially pleased when Senator Glenn requested that the Subcommittee pursue the question of airline safety last December. I joined with Chairman Roth in asking the Subcommittee staff to examine, in a bipartisan effort, the status of commercial aviation safety in the United States, including the effectiveness of the FAA in maintaining and enforcing high safety standards within the airline industry. I know that both the Majority and Minority staffs have worked together in preparing for these hearings. I want to thank Chairman Roth, and his staff, for their full cooperation in conducting this investigation.

I also want to express my appreciation to Senator Glenn for bringing this important issue to the attention of the Subcommittee and for his active participation, and that of his staff, in this investigation. We are very fortunate on this Subcommittee to have had the benefit of his unique and very considerable personal experience in examining an oftentimes complex and technical issue.

During the course of this investigation, the Subcommittee staff has spoken to a wide variety of individuals, both in government and in private industry, who have voiced serious concerns about the quality of aviation safety in the United States.

We have been told that deregulation in 1978 drastically changed the nature of commercial aviation in this country, transforming what had been an essentially stable industry into a mushrooming area of new and changing business growth. We have heard that the FAA has, in many ways, been unable to adequately address those changes. We have been told of a substantially increased FAA workload in certification and enforcement, despite severe manpower restrictions.

We have heard of airlines straining to meet the financial pressures of deregulation by cutting, or at the least, minimizing costs on maintenance and safety procedures. We have been told of aircraft which have been allowed to fly with an excessive number of inoperable, or deferred, maintenance items. We have heard of increased pressures on pilots to fly beyond FAA-imposed hour limitations.

We have heard of serious inconsistencies in FAA policies from one geographical region to the next, and the unpredictability and unfairness which this has generated within the industry. We have been told of poorly trained inspectors and of favoritism in the inspection process. Lastly, we have been shown substantially altered FAA inspection recommendations which raise serious questions about the credibility of the enforcement process itself.

All of those allegations should be of great concern to both the American public and those individuals within the airline industry. I am hopeful that, through the witnesses we will hear from today and next Thursday, we will be able to explore in detail those and other issues which are critical to the question of aviation safety. As with other issues which the Subcommittee has examined in the past, we intend to review those allegations in a thorough, fair and constructive manner.

I look forward to the testimony this morning from Senator Simon, on a proposal for an in-flight monitoring system for commercial airlines; from a panel of pilots who will share with us their concerns on air safety; and from representatives of Arrow Air, Inc.

On next Thursday, March 13, the Subcommittee will continue with a second day of hearings, focusing on some of the criticims that have been raised regarding the FAA's certification, surveillance and enforcement programs. I am particularly interested in hearing form those retired FAA inspectors who have alleged that their 1984 inspection on Continental Airlines was substantially altered by their superiors within the FAA. Their testimony, as well as that of the FAA, will be heard next week as the Subcommittee continues its examination of this most important issue.

Mr. Chairman, I again want to thank you for your excellent cooperation in putting these hearings together. I share your interest, and that of Senator Glenn's, in a thorough, balanced, and productive review of aviation safety.

OPENING STATEMENT OF SENATOR GLENN

Senator **GLENN**. Mr. Chairman, I want to commend you for your quick response and the efforts of this subcommittee to hold hearings on air safety. Last December, just after the Arrow Air crash at

Gander, Mr. Dan Hood, who is one of our witnesses today, called me from Cleveland. He is a former pilot for Arrow Air. He wanted to tell about some of the conditions that had existed there, that might be pertinent to an understanding of the Gander accident.

He was not without personal involvement, in that his fiancee was one of the flight attendants who died in that crash. They were to be married in another couple of months, in May, as I recall. I heard his story; I read the testimony; and of course, Arrow Air will have their side of this, too. I am not specifically taking sides by opening my statement with that kind of comment. I want to hear all sides of what happened surrounding that crash.

We do not know yet. The Canadian Government, of course, has not released their findings on that, nor are we trying to bring that out at this hearing. But we are concerned that, as the chairman has properly stated, there is a rising public concern about air safety in this country, indeed, around the world. Some of it involves American equipment, although not American procedures, necessarily. So we are concerned about all aspects of this.

We are not here to condemn anyone this morning; we are here to try and ferret out the truth. We are saying that where there is a crash like this, if they were operating outside the rules, we ask why it took so long for FAA to ground the airline. If they were operating inside the rules, we must ask why the FAA does not tighten those rules, change them. Are our rules as tight as the Canadians', for instance, on inspection of aircraft?

I was talking with some of the people involved with this. I understand that planes coming from Britain or Canada or other countries quite often are in far better shape on the average because of the inspection system they have than our American aircraft of the same type.

We want to determine things like that. As far as this committee's role in this, we have a role anytime in anything that has to do with Government organization. There has been some discussion back and forth with other committees here as to whether we are overstepping our bounds. We are not.

We have an oversight role over whatever the Government gets into to see that Government organization and the way we are set up to cope with situations is proper and efficient or could be done in a different way to be better carried out.

I think we need to get into the National Transportation Safety Board. Do they need more people? Do they need more investigators? Their numbers of investigators went down on budget cuts. I think that is a tragic mistake.

Does the FAA need help? What is their role? We don't want to make this a witch hunt. Normally, NTBS makes their recommendations to FAA. FAA then implements those things as they see fit.

They don't have to do all the things, but they normally do most of the things recommended to them. There can be no two ways on air safety. We now depend on aviation in this country. It is not just an adjunct. It is not just an addition to rail travel or automobile travel. Our business, our commerce in this country depends on air travel, and it has to be as safe as possible.

I would note just a few facts and figures. I will run through these very rapidly here, but 50 percent more commercial aircraft fly today for three times as many airlines as was the case in 1977. These figures are gleaned from a number of different publications by my staff, incidentally.

Before deregulation, airlines devoted 12 to 30 percent of their budgets to maintenance. The average figure today is 7.6 percent. From 1978 to 1983, the number of air carrier inspectors fell from 604 to 569. That was on cutbacks at FAA. Now, the previous level has been restored in the past 2 years, and Mr. Engen, Don Engen, has plans to hire 500 more aviation standards field inspectors and support personnel over the next 3 years. Maybe that is trending in the right direction, but is that enough? Maybe we need three times that number, because we have such a proliferation of new airlines following deregulation.

Are we going to be able to cope with all these, or not? Seven-to-eight thousand pilots were hired in 1985, more than were hired throughout all of the 1970's. Are they all capable? Are they all trained properly? It is a mammoth job.

The average time for a copilot to become a pilot has gone from 14 years to 9 years. Seven percent of the pilots hired has less than 2,000 hours' experience, compared to only 1.3 percent 2 years earlier. In 1985, 45 percent of the pilots hired had military flying experience compared with 66 percent in 1983.

Eighty-six percent were college graduates. During 1983, 100 percent of airline pilots hired were college graduates, so one of our publications said.

In 1985, there were 14,300 air controllers to handle 6 percent more flights than 17,500 did in 1980. Is the automation and some of the new equipment making up that difference? I don't know, but we should find out. This is a significant one. In a survey, 44 percent of pilots believed maintenance of aircraft has worsened in the past 5 years.

A majority, 51.2 percent of pilots, believe airlines stress profit at the expense of safety. Two-thirds said they believe deregulation has made flying more dangerous. In 1978 to 1983, 240 commuter airlines went out of business, but the number of passengers on commuters went from 11 million to 26 million in 1984. The number of commuter planes increased 70 percent from 1,074 to 1,747. Budget cuts have sliced the number of National Traffic Safety Board employees from 401 in 1980 to 340 in 1985.

I would submit to this committee and all the people within earshot of us here that cutting back NTSB people to look into aircraft accidents and why they happen, is about as stupid as anything I can think of.

The point of that is what happens with Gramm-Rudman? Cuts across the board. That is going to occur later this year if we don't work out something this summer; we could have up to 25 percent cuts on all these things. FAA and NTSB are not exempted from Gramm-Rudman. Another area is, is FAA organized properly to do the job that has to be done? Do they need nore people, equipment or training? Do we need a new agency? Do we need to split their duties in some way?

I think all of these are things we need to look into. That is a longer statement than I planned to give, Mr. Chairman, but I think it outlines the breadth of what this committee need to look into, and its responsibilities, and I thank you for holding these hearings.

Chairman ROTH. Thank you, Senator Glenn.

Senator Gore.

OPENING STATEMENT OF SENATOR GORE

Senator GORE. Thank you very much, Mr. Chairman. All of us here are still grieving over the tragic loss of 248 brave soldiers and eight crew members who died in the crash of an Arrow DC8 in Gander, Newfoundland, in December. Those brave heroes from Fort Campbell in Tennessee and Kentucky gave their lives to serve for our country. We owe it to them to see that such an incident can never occur again.

It is a shame that public attention and congressional oversight so frequently seem to focus on air safety only in the aftermath of a fatal and tragic accident. Considering the magnitude of this tragedy, we have a duty to ensure that in the future, all Americans can travel in safety.

We still do not know exactly what caused the Gander crash, and we probably will not know until Canadian authorities complete their investigation.

However, ample evidence already suggest that Arrow Air's safety record has been marginal, at best. On November 11 1982, a student engineer on a training flight with Arrow Air died of an air embolism when his plane lost pressure. When the NTSB investigated the fatality, which was almost surely caused by equipment failure, Arrow officials failed to cooperate. The airline has a long history of infractions against required guidelines for safe air travel. In its national air transportation inspection, the FAA ranked Arrow Air at the bottom.

Mr. Chairman, I am eager to hear from the former Arrow pilots who will testify today. I believe their testimony will show us a fly-by-night airline. It cut every corner on safety and pulled out every stop to keep its planes moving and revenues coming in. I congratulate you on convening this hearing, Mr. Chairman, and I look forward to the second day of hearings next week, when we can question the FAA about what appears to me to be very shoddy enforcement of the regulations designed to guarantee air safety.

Chairman ROTH. Thank you, Senator Gore.

Senator Chiles.

OPENING STATEMENT OF SENATOR CHILES

Senator CHILES. Mr. Chairman, I add my expression of appreciation to you for calling these hearings and conducting this investigation. There is little doubt that air safety is of the utmost importance to all of us, and while transportation experts continue to point to the fact that air travel is still the safest mode of transportation, when accidents occur, they are devastating. The prime example, of course, is the Arrow Airline crash in Newfoundland on December 12, 1985.

The resulting situation has left confusion in its wake. Characteristically, some questions have gone unanswered, while some answers have gone unquestioned. I am hopeful today's hearings will be a start toward getting answers and questions together. The objective of such an inquiry should be overwhelmingly in favor of prevention.

However, it is consistent with the role of this subcommittee to pursue allegations of mismanagement, inefficiency and negligence on the part of any governmental agency. In this case, the agency involved is the Federal Aviation Administration. I understand that FAA is not scheduled to testify until next week. I am sure representatives from the agency are here and are aware of the subcommittee's concern.

The facts of the situation have been outlined. We know of the tragic crash, and we know of the tragic loss of all 248 passengers who were soldiers from the U.S. Army 101st Airborne Division and the crew of eight who were also killed.

We know the National Transportation Safety Board is participating with the Canadian authorities in trying to learn what caused the crash and the resulting loss of life. We are all anxiously awaiting the results of the investigation. In the meantime, allegations surrounding this tragedy have to be explored, and answers have to be found for some of the questions that have arisen.

For instance, does the FAA equate the deregulation of the airline industry with the decrease in their responsibility to ensure that safety rules are followed? Are the FAA inspectors making informal visits, their inspections and citations casually given and the citations viewed as top priority items by the airline industry?

How much responsibility and authority do pilots have in this entire process?. How far can they go in pointing out the kind of difficulties before their own jobs are placed in jeopardy?

These are legitimate questions that deserve some public answers. It is sad that it took a disaster of this magnitude of Arrow Airline and a crash before we started to look at the problem area. Mr. Chairman, I have some serious questions about the categories of deferred maintenance items.

As I understand it, those are mechanical items on the plane which are due for servicing but are allowed to be delayed. I am told that normally, a few of these delays are not regarded as safety hazards, but collectively, over a period of time, they could be very serious.

It would seem to me that if an item is serious enough to be cited by the FAA, then it is serious enough to be fixed by the airlines. Truthfully, the explanation that everybody has planes with many of these deferred maintenance items does not give me cause for comfort; it gives me cause for great concern.

I know that the subcommittee has many details and specific questions to ask of the witnesses here today and at a related hearing. I hope the questions get adequate answers. If we can apply the answers in a manner that will avert further actions in these hearings, it will certainly be of service to the nation.

[At this point, Senator Glenn withdrew from the hearing room.]

Chairman Roth. Thank you, Senator Chiles.

Our first witness today will be our distinguished friend and colleague, Senator Paul Simon, who shares with me a serious concern for the condition of air safety. Senator Simon has cosponsored a number of bills pertaining to the aviation industry and will speak today about a new design for computer equipment which could enhance the safe operation of aircraft.

Senator Simon.

TESTIMONY OF HON. PAUL SIMON, U.S. SENATOR FROM THE STATE OF ILLINOIS

Senator SIMON. Thank you very much, Mr. Chairman and my colleagues. Let me just make a few general comments before I get into the specifics you referred to, Mr. Chairman. First, I, through a series of just personal experiences, have become interested in this whole question of airline safety. I voted for deregulation. I am not sure, right now, whether that was a right vote or not. With the mergers, with concentration, I am afraid that poll that you cited, Mr. Chairman, of the airline pilots is an accurate reflection of reality.

The GAO surveyed, in the report of August, FAA's inspections of 92 airlines in 1984 that carry more than 30 passengers. It found some airlines received virtually no inspections by the FAA.

I would point out one other thing: In addition to the fatalities—and we know what has happened there—1984 was a record year in near misses. In the first 7 months of 1985, you had more near misses than in the record year of 1984. I dropped in at Aurora, IL, where the controllers handle the Midwest, a number of States in the Midwest, including the State of Ohio, I believe, and talked to the people there, and I said, "What should we be doing to improve air safety?"

The answer, frankly, from these people, was if we're really interested in air safety, we ought to, after careful screening, bring in some of the experienced controllers. This is what the controllers told me; it is what the management people told me; it is what everyone told me.

I happen to think the President made the right decision in firing the controllers. I don't think you can strike against the Federal Government. But there has been a punishment. These people have lost 4 years, 4 years of retirement benefits. I think the big question now is: How do we improve air safety? If this largest facility for controlling air in this country, if the opinions of these controllers are accurate—and they know a heck of a lot more than I do—we ought to be carefully bringing back some of the people who were fired before. That is by way of very general background.

Because of my interest, I was contacted by a Virginia-based firm, Universal Flight Systems Corp., and I hastily add, I don't own any stock or anything else in this firm. They have designed a system that can give advanced warning to crews and to ground maintenance personnel through computers of any problems that exists anywhere in the plane.

I wrote a letter to the FAA saying, "Take a look at this." Frankly, I don't know whether this a good system or a bad system, but what I asked the FAA to do is to evaulate it.

If these people are correct—and the officers of the corporation are here and would be happy to answer any questions you may have—if these people are correct, we have a means to really improving safety in our airlines appreciably. The FAA responded that

that is up to the marketplace; it is up to the industry; that is not their responsibility to evaluate something like that.

My strong feeling is we can't just use these things, these easy phrase, "It is up to the marketplace; it is up to the industry." I think that is the responsibility of the FAA, and I would hope that this committee might move them in that direction.

I would be happy to answer any questions. The people from this particular company are here. They can give you the answers. They have some charts and other things if you are interested. I am not a technician. I am not here promoting their particular product. I do think it ought to be evaulated. That is all I ask of FAA.

[Senator Simon's prepared statement, with attachments, follows:]

TESTIMONY OF SENATOR PAUL SIMON

HEARINGS ON AIR SAFETY

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS

COMMITTEE ON GOVERNMENT AFFAIRS

March 6, 1986

Mr. Chairman, I commend the Subcommittee for convening these timely hearings on an issue of great importance. Two trends apparent today should cause us to take the kind of fundamental look at air safety that this Subcommittee is beginning today.

The first trend -- a product of deregulation -- is the declining ability and willingness of our airlines to go well beyond FAA minimums in their safety performance. Before, airlines could afford to outperform the FAA standards. Today, everything, including safety, is part of the bottom line.

The second trend is the increasing concentration within the airline industry. The proposed merger of Eastern and Continental is the latest signpost of warning along that road.

Taken together, these two trends are leading us toward what clearly would be the worst of both worlds -- declining safety, and diminished price competition.

To abate the safety concerns implied by these trends, we need to recognize that the FAA minimums are far more significant today than they have been before, and they should be thoroughly re-examined for their adequacy, and they should be strengthened where warranted.

The added importance of FAA's role in safety assurance is the subject of another matter I would like to discuss with the Committee today: The need for FAA to become more aggressive in sparking and disseminating new safety-related technologies.

Some of the outlines of the air safety problem are evident. The National Transportation Safety Board reported on January 13 that 1985's 526 fatalities in all U.S. air carrier operations was second only to the record of 655 fatalities in 1977 -- figures which do not include air tragedies abroad that involved similar aircraft.

In its report on the FY 1986 Department of Transportation Appropriations Bill (S. Rept. 99-152) the Senate

(continued)

Appropriations Committee voiced concern that "the post-deregulation competitive environment could lead to cutting corners in air carrier safety practices as well as stretching FAA resources to the limit."

Deregulation has produced rapid growth in the airline industry. The number of air carriers using large (30 seats or more) aircraft has risen from 72 in 1978 to 187 at the end of 1985. Many observers are concerned that this growth stretches the FAA air carrier inspection force too thinly.

Ironically with the growth in air carriers -- nearly a 150 percent growth rate since 1978 -- the FAA has failed to effectiviely increase the number of airline inspections from its mid 1960's level.

According to the Airline Pilots Association, the FAA would have to hire an additional 2,400 inspectors in order to maintain the same ratio of inspectors to operators that existed in 1979. When deregulation took effect in 1978 the airline inspector force was increased from 605 to 674 over a three year period.

But it was cut for budgetary reasons in 1982 and again in 1983 -- first to 576 and then to 569. The lowest level was in 1983 when only 508 positions were authorized. In 1984 Secretary of Transportation Dole restored the airline inspector force to 674. Unfortunately, according to the Congressional Research Service, there was no commensurate restoration in the number of personnel to support the inspectors.

With the increased number of carriers today compared to 1978 there are more planes in service, many of which are older and need more maintainance. In today's business environment, aircraft are being flown more hours per day and productivity is up, but there is less time between flights to accomplish unscheduled maintenance.

A GAO study (GAO/RCED-85-157, Aug. 2, 1985) of the FAA inspection program found widespread disparity in the frequency of FAA inspection activity. GAO surveyed FAA's inspections of 92 airlines in 1984 with emphasis on aircraft that carry more than 30 passengers. It found that some airlines received virtually no inspections by the FAA. In a follow-up letter to the FAA, Representatives William Lehman and Norman Mineta noted that the GAO data suggest (1) the absence of a systematic program for insuring that all air carriers are operated and maintained in compliance with safety standards and regulations, and (2) that the FAA may not have the resources necessary to insure that all carriers are being operated safely.

(continued)

Those two points are especially troubling and suggest the need for a more aggressive effort by the FAA to encourage promising new technology. Let me discuss a good example of this. I have recently had the opportunity to look at a proposal for the development of an aircraft flight management sensory system by Universal Flight Systems Corporation.

What they propose is applying a higher degree of technology that would allow carriers to more easily and more thoroughly operate and maintain their equipment within FAA standards.

In general terms, what this firm is suggesting to FAA is use of new technology to equip aircraft with sophisticated local area network computers, the same principle used on complex space hardware to sense potential problems before they appear.

The idea is to give flight and maintenance crews far better data and far earlier warnings of defects that could lead to disastrous equipment failures.

In my letter to FAA Administrator Donald Engen, regarding the proposal submitted by Universal Flight Management Corporation I stated that:

> "Frankly, I do not feel that we are doing all that should be done to assure the safety and integrity of commercial aviation. Contemporary electronic-computer technology provides us with the capability to monitor the conditions prevailing throughout an aircraft on a constant and comprehensive basis. Yet, apparently, there is considerable disparity between potential and reality.
>
> The approach proposed by Universal Flight Systems seems worthy of serious consideration and support. The costs are nominal yet the benefits, both direct and indirect, seem substantial--if not incalculable.
>
> Indeed, if sophisticated, comprehensive, monitoring systems can be offered on contemporary moderately priced domestic autos, it seems to me that every effort should be made to encourage and support the emplacement of such systems on both new and existing aircraft."

As many of the witnesses that will appear before the Subcommittee know far better than I, today's airline cockpit has become a complex world of instruments, indicators, sensors, dials, meters and machines, all intended to inform the pilot and crew of the condition of the aircraft and the environment.

Better management of that information can help the crew to use that information, and the technology is available to do that.

(continued)

An onboard LAN computer can continuously monitor whether the equipment is performing within narrow limits of acceptable operation. The computer can determine when there has been a change in the sensors or equipment performance over a period of time. Such a change could indicate deterioration in equipment function, not just for one component, but for hundreds of flight systems simultaneously--not just for one flight, but for an entire week of flight operations. It is now also possible for a maintenance department to receive the same information instantaneously from the aircraft as the pilot receives it in the cockpit. It is even possible to monitor all the aircraft owned by an airline simultaneously. Trends of component quality on an entire fleet of aircraft could be determined within minutes. More importantly, the maintenance condition and requirements of an aircraft can be determined despite its distance from its assigned maintenance facility.

Recent announcements of on-board systems and systems research, such as on-board Wind Shear Radar, electronically controlled Flight Control Systems and airborne collision avoidance systems indicate that the industry recognizes the potential for a step like this.

You don't have to look far to see the practical safety benefits of using new technologies like this. For example, questions have been raised about the reliability of the 8,000 Pratt & Whitney JT8D engines now in commercial use. By fixing sensors throughout the propulsion system, the failure of engine components could largely be predicted, and operational failures could be prevented.

Regretably, this example is instructive in FAA's approach to emerging safety technologies.

I recently received from FAA a copy of its letter to Universal Flight Systems Corp., dated Feb. 25, 1986.

In rejecting further evaluation of the UFMS proposal, Mr. P. Cornell, the manager of the Procurement Management and Services Branch says:

> "The mission of the FAA restricts research, engineering and development program activities for the development of aircraft systems to a narrow range. Activities supported are based generally either on the need for information to support our regulatory mission, i.e., airworthiness cerrtification, or on our responsiblility to develop nationally standardized systems where the compatibility and interoperability of systems is an issue. Our work on an airborne collision avoidance system is an example of a

(continued)

> development based on the need to assure system compatibility." [Emphasis added]

To the contrary, this is an example of proposed development of a "nationally standardized system" with the "compatibility and interoperability or systems" in accord with FAA's rationale.

Even more dismaying, in light of the potential safety benefits inherent in proposals like this, is the following statement in Mr. Cornell's letter:

> "From an aircraft safety viewpoint, the potential to manage a large amount of information in real or near real time may have an economic benefit, over more traditional methods, and might appeal to some airlines. Howeveer, improvements in the cost, size, and system capability of information processing equipment is not FAA's responsibility. The agency must support programs that have a direct connection with safety, and is not empowered to fund development of systems, regardless of merit, that are rightfully the responsibility of the industry and the marketplace."

Mr. Chairman, this is an example of a promising new application of available technology that should be within the purview of FAA to evaluate and encourage, whether or not FAA today sees it as its role. In some cases the industry and the marketplace have and will take the leadership to usher in new technology, but we cannot be sure that will always happen. It has not yet happened with this LAN technology, to be sure. When the issue is safety, we must not leave things like that to chance.

It is important that Congress and the FAA re-evaluate FAA's role as an instigator and incubator for new technologies that can keep our airways the world's safest.

A good place for the agency to start would be to take a complete look at this proposal, and to act or not act then on the merits. We cannot be satisfied with the agency's desire to leave decisions like this to the marketplace.

#####

PAUL SIMON
ILLINOIS

COMMITTEES
LABOR AND HUMAN RESOURCES
JUDICIARY
RULES AND ADMINISTRATION

United States Senate
WASHINGTON, DC 20510

January 3, 1986

COPY

Admiral Donald Engen USN(Retired)
Administrator
Federal Aviation Administration
800 Independence Avenue, SW
Washington, D.C. 20591

Dear Admiral Engen:

I have recently had the opportunity to meet with Mr. Joseph Child and Mr. Robert Schneider, representing Universal Flight Systems Corporation of Falls Church, Virginia. I was most favorably impressed by their proposal for the development of an aircraft flight management sensory system.

Now more than at any time in my memory the question of commercial flight safety is an issue. Whatever the facts may be relative to other modes of travel or past comparisons, the perceptions of the traveling public are of concern to me.

Frankly, I do not feel that we are doing all that should be done to assure the safety and integrity of commercial aviation. Contemporary electronic-computer technology provides us with the capability to monitor the conditions prevailing throughout an aircraft on a constant and comprehensive basis. Yet, apparently, there is considerable disparity between potential and reality.

The approach proposed by Universal Flight Systems seems worthy of serious consideration and support. The costs are nominal yet the benefits, both direct and indirect, seem substantial--if not incalculable.

Since the 1930s the United States has been the world leader in building the aircraft that have sustained commercial aviation. Of late there are signs that that leadership cannot or should not be taken for granted. Airbus Industries presently offers flight systems that are, evidently, quite comprehensive in the monitoring of numerous aspects of the aircraft's status.

Indeed, if sophisticated, comprehensive, monitoring systems can be offered on contemporary moderately priced domestic autos, it seems to me that every effort should be made to encourage and support the emplacement of such systems on both new and existing commercial aircraft.

Only a few years ago we had in Illinois what appeared to be a sucessful, flourishing air line headquartered in Carbondale. Air Illinois provided service to virtually all of Illinois. With one fatal crash of a Hawking-Siddley 748, 10 people and, in effect, the airline itself, died. Faulty maintainance procedures had an effect, yes. But had the aircraft had a sensory system such as that proposed by Universal, the crash would have, in all likelihood, been averted.

What happened with Air Illinois may be both symptomatic of and a portant for commercial aviation. With de-regulation corners are being cut when it comes to aircraft maintainance. New, more comprehensive systems must be employed--if only for the sake of cost efficiency. Not to do so is to court disaster--in the most literal sense of the term.

As I stated at the beginning of this letter, perceptions of safety, whether factually justified or not, may be changing. One need only look at the current figures relative to tourism to Europe in the aftermath of terrorism to see how perceptions affect travel patterns.

I strongly urge you to give every consideration to the proposal submitted to you by Universal Flight Systems Corporation.

Best wishes for the New Year.

Cordially,

Paul Simon

Paul Simon
U.S. Senator

PS/jmm

cc: Secretary Elizabeth Hanford Dole

Enclosure

February 25, 1986

Mr. Joseph R. Child
President
UNIVERSAL FLIGHT SYSTEMS CORP.
3328 Glenmore Drive
Falls Church, VA 22041

SUBJECT: UNSOLICITED PROPOSAL #86-012, entitled "Proposal for the Development of Universal Flight Management System."

Dear Mr. Child:

Your proposal for development of a holistic approach to information management in the operation and maintenance of aircraft has been reviewed by several technical offices within the Federal Aviation Administration (FAA).

The mission of the FAA restricts research, engineering and development program activities for the development of aircraft systems to a narrow range. Activities supported are based generally either on the need for information to support our regulatory mission; i.e., airworthiness certification, or on our responsibility to develop nationally standardized systems where the compatibility and interoperability of systems is an issue. Our work on airborne collision avoidance system is an example of a development based on the need to assure system compatibility.

From an aircraft safety viewpoint, the potential to manage a large amount of maintenance information in real or near real time may have an economic benefit, over more traditional methods, and might appeal to some airlines. However, improvements in the cost, size and system capability of information processing equipment is not the FAA's responsibility. The agency must support programs that have a direct connection with safety, and is not empowered to fund development of systems, regardless of merit, that are rightfully the responsibility of the industry and the marketplace.

In view of the foregoing, we cannot fund your proposal, and are returning all extra copies. However, your interest in FAA programs is appreciated.

Sincerely,

Original Signed by:
P. CORNELL
P. Cornell, Manager
Procurement Management and
Services Branch, ALG-380

Enclosures

cc: Senator Paul Simon
✓cc: Patricia Sepulveda - Legislative Asst.
Congressman Kenneth J. Gray

Chairman ROTH. Thank you, Senator Simon. As a courtesy to you, I did want to give you the opportunity to raise this matter today. Rather than ask a number of questions, I would suggest that any members of the panel can do that subsequently, because we do have a very full agenda. If there is any particular questions that you would like submitted to FAA next week when they appear before us, I will be happy to make sure that they get submitted, either orally or in writing.

Senator SIMON. I would welcome that opportunity, Mr. Chairman. I appreciate that.

Chairman ROTH. Senators, do you have any questions?

Senator GORE. Mr. Chairman, I have several pages of written questions which the folks from Universal Flight, I hope, will respond to in writing.[1] I find this statement very helpful, and perhaps the system alluded to here might really be of great usefulness in solving this problem.

Chairman ROTH. Senator Chiles?

Senator CHILES. Mr. Chairman, I think we appreciate Senator Simon's statement, and I understand what he is saying, that he is not advocating this particular system. But what I understand you are saying is that regardless of deregulation, we shouldn't be getting out of the safety business. That ought to be a prime Government function; it ought to be a prime FAA function; and if not this system, some system like this, and why aren't we doing something to do an evaluation to see?

I agree with you. The statement, "to leave it to the marketplace" seems to me just about as callous as anything could possibly be. I think that is what we see as a result when we see the crash that we have had in Newfoundland. That was left to the marketplace.

That is kind of hard to say to the widows, to the people that are here, left after that crash, "We have deregulation now, and we just left it to the marketplace."

I applaud what the Senator is doing, and I would hope that maybe when we get to the day of hearings with FAA, if not before, we could be pressing that; why aren't we looking at some evaluations of systems like that? Maybe there should be a competition as to what system we should be looking at, but the idea of saying, we won't pay any attention to that, I think, is entirely wrong.

Senator SIMON. I appreciate the comments of both of you, and I could not concur more in your comment about leaving it to the marketplace.

The reality is, if you are running a business and it is getting marginal on profitability, you cut corners, and some of those corners you cut result in less safety. That is, I think, the grim reality. The FAA ought to be in there making sure we have got transportation that is safer than driving on the highways.

[At this point, Senator Glenn entered the hearing room.]

Senator SIMON. I am not impressed by those statistics at all. What I want to know is, is air safety as safe as it can be, realistically, practically? That is the real question.

---

[1] The responses to written questions submitted by Senator Gore were marked exhibit No. 1 and retained in the subcommittee files.

Senator CHILES. And if we are going to open up the system for competition, which we know means that people are looking at their bottom line more, then is it not more the responsibility of the Government to see that while that competition is going on, we are enforcing certain safety standards?

Senator SIMON. Absolutely, absolutely.

Chairman ROTH. As I said earlier, I think we all agree that in deregulation, we did not deregulate safety. If anything, the responsibility and burdens on Government are even higher. I think, Senator Simon, you posed a question that is very significant, not only in this area, to be candid with you, but in others, and that is: How can we better utilize modern technology for the purposes of safety and make Government more effective?

[At this point, Senator Cochran entered the hearing room.]

Chairman ROTH. I think we are still in the dark ages as far as Government is concerned in that area. But I thank you for being here today. We look forward to working with you.

Senator SIMON. I thank you very, very much.

Chairman ROTH. At this time, I would like to call the first panel. Daniel Hood is a former Arrow Air pilot; Michael Sanjenis—and I understand he is not too upset with how we pronounce his name—a former Arrow Air pilot; and George Lycan, a pilot with Rich International Airways.

It is a practice for all witnesses under our rules to be sworn. So I would ask all three of you to please rise.

Raise your right hands. Do you swear the testimony you will give before this subcommittee will be the truth, the whole truth and nothing but the truth, so help you God?

Mr. HOOD. I do.

Mr. SANJENIS. I do.

Mr. LYCAN. I do.

Chairman ROTH. Thany you, gentlemen, I will ask that Mr. Hood lead off with his testimony.

TESTIMONY OF DANIEL E. HOOD AND MICHAEL SANJENIS, FORMER ARROW AIR PILOTS; AND GEORGE LYCAN, PILOT, RICH INTERNATIONAL AIRWAYS

Mr. HOOD. Mr. Chairman, my name is Daniel Hood. I am a professional pilot with 23 years of experience in aircraft from single-engine piston to multiengine and jet aircraft. I hold an FAA airline transport certificate, was rated in the Boeing 707 and 720; the DC-8, Convair 240, 340, 440 and jet commander.

I have accumulated over 16,000 hours of flight time, which includes over 10,000 hours in four-engine jets with 4,000 hours of that as pilot-in-command on the Boeing 707 and DC-8.

In addition, I hold a current flight engineers certificate and a turbo-jet rating and a navigators certificate.

I also hold a certified flight inspectors certificate, and I have held many positions of responsibility in aviation airline management, including vice president and director of operations; director of flight control. I have been an FAA check airman and training captain on the Boeing 707 and DC-8. I am currently a pilot for a major U.S. international scheduled carrier.

I worked as a pilot for Arrow Air from April 1983 until April 1985. The last 3 months of my employment with Arrow, February through April, I was on a personal leave of absence. I resigned in April 1985.

I am prompted to speak out about my experiences at Arrow Air because of the crash of the Arrow DC-8 at Gander, NF, on December 12, 1985, which took the life of my fiancee, who was a crewmember aboard that aircraft.

During my appointment here, I found Arrow's attitude toward maintenance to be one of performing only marginal maintenance on its airplanes. Arrow would use the minimum equipment list, which sets forth the minimum equipment required for certain flight distance as its maximum level of maintenance.

This resulted in Arrow deferring maintenance on numerous items for long periods of time. Pilots would regularly be confronted with several inoperable items on the aircraft, and the level of safety redundancy built into these airplanes by the manufacturer with all the equipment operating was obviously at a lower level than which myself and the rest of the pilot groups was comfortable with.

Even when Arrow purported to fix an item, it often did so in a manner that would enable the airplane to depart quickly, on schedule, rather than taking measures to really cure the problem. For example, Arrow Air's Boeing 707's had a chronic history of sticking thrust reversers.

The bushings in these thrust reversers, in order for them to work properly, have to be round. Over a period of years and operation of these thrust reversers, they will wear out, and the bushings become egg-shaped rather than being round.

In order to have these reversers working properly, they have to be overhauled periodically, a change in the bushings, and the thrust reversers on the Arrow airplanes were not in that kind of condition. They weren't in the overhaul condition. It became a common practice at every stop that we would have to have the flight engineer go out and manually stir the reversers so they wouldn't stick, and we couldn't stow the reversers in the normal manner.

Arrow's fix on this was to take and put more grease on them. If you put enough grease, anything, even egg-shaped, will roll through it for a period of time until that grease wears off, and then the problem is still there. In other words, the problem wasn't fixed. I was so annoyed with this recurring problem at the time, I was sitting with an airplane in Orlando with three stuck reversers with only one engine in forward thrust when I reached the ramp.

But I called Mr. Skully, Arrow's senior VP of maintenance and operations, to complain about the problem. As usual, the only fix Arrow performed was to send a mechanic up from Miami with a can of lubricant to lubricate the reverser mechanism.

Another example, the air-conditioners on the 707s' freon system continually malfunctioned. I remember this problem was particularly acute on aircraft 707PD. It was common for Arrow pilots to log items as defective and have them signed off by maintenance and have the problem recur again immediately.

Arrow's periodic maintenance was also deficient.

Chairman ROTH. Could I just interrupt? I would like to go back. What is the safety problem with a stuck reverser?

Mr. HOOD. A stuck reverser in itself does not create a safety problem unless there is other conditions present where you have a slippery runway or a wet runway, and you have reversers stuck in reverse thrust on one side of the airplane and engines that are not in reverse on the other side of the airplane. It can cause or may cause a control problem during ride-out or taxi.

In one situation, I had three of them stuck in reverse. The only thing I could do was shut the engines down, because I couldn't taxi with three in reverse and one in forward thrust. I had to taxi one airplane on one occasion to the ramp. This could present a serious problem, too. If that engine should fail or that operating generator should fail for some reason, you have lost all power on the airplane, and the ability to communicate with the passengers to effectively evacuate the airplane are lost.

Senator GLENN. Mr. Chairman, could you yield?

Have the thrust reversers ever stuck in flight to your knowledge? Not you, have you ever heard of a case where that happened?

Mr. HOOD. Yes; I personally had a problem with a 707 where we had an inflight reversal, but not with Arrow Air.

Senator GLENN. That could be a fatal failure, I presume?

Mr. HOOD. Well, it wasn't in our case.

Senator GLENN. It wasn't but it could be.

Mr. HOOD. It could be, but it was not.

Senator GLENN. Was this roller problem that you speak of, could that contribute to a malfunctioning thrust reverser?

Mr. HOOD. I really can't answer that question. I am not well enough versed in that area.

Senator GLENN. Thank you.

Thank you, Mr. Chairman.

Mr. HOOD. I mentioned the periodic maintenance as being deficient. On one occasion, an airplane I was flying from Montego Bay in Jamaica to Baltimore, we lost all hydraulic fluid in the utility system, which is the system that operates the flaps and the landing gear on the airplane, and we heard from Miami; we had to rely on emergency extension procedure for the landing gear.

In this case, I was unable to lock down the right main landing gear manually. Luckily, we were able to use some residual return fluid from the main landing gear after the extension and an engine driven pump just prior to touchdown to kick the right landing gear over to center and get it locked down before all the fluid was lost overboard.

When maintenance checked the emergency landing gear extension component, they found it was bent and corroded, preventing the crew from ever being able to manually lock it in the down position. The presence of corrosion, in addition to the manual extension system, which is estremely important on an airplane, means that the emergency system had not been periodically checked, as it should have been.

Subsequently, when an emergency arose where the manual system was needed, the aircraft was not equipped to meet that emergency.

Another distressing situation at Arrow was its disregard for the Federal regulations with respect to pilot flight time limitations. The regulations provide that on international flights, a crew can only fly 12 hours in any 24-consecutive-hour period. On more than one occasion, I was informed by Arrow flight control that I—sorry, I informed Arrow flight control that I would exceed this 12 hours, the legal flight time limtations, if I continued to fly past an intermediate point in my schedule.

I requested a replacement crew to be available at the next stopping place. When I arrived at the intermediate destination, there was no replacement available, and the planeload of passengers that I was with was waiting to go on. At that point, the flight controller told me if I did not continue to fly, Arrow's MAC contracts would be canceled; this was a very important flight; and that everyone at Arrow would lose their jobs. This type of pressure on pilots is intolerable.

A pilot should not have to choose between violating Federal Aviation Regulations and sinking their company. The company should be responsible to make replacement crews available to comply with the Federal regulations or take the responsibility upon themselves to suffer the consequences.

Even when Arrow did not pressure pilots to transgress the applicable flight time regulations, the company put unrealistic crew duty time demands on its pilots, flight engineers and flights attendants, which resulted in them operating on a fatigued and potentialy unsafe environment.

Sixteen- to 18-hour workdays are typical, and I personally had some workdays extending over 20, 22 hours. This situation often occurred in instances where crews had flown the maximum hours allowed under the Federal regulations, that were then asked by Arrow to ferry airplanes, which means to reposition airplanes without passengers in a different location, for maintenance or whatever reason.

The FAA does not regulate the pilot's flight time for ferry flights, which are considered for the carrier's benefit. This means that the time you fly without paying passengers is not counted in determining how many hours in 24 you can fly or you are flying.

While Arrow did not violate the law by scheduling crews for ferry flights after they had already been working long periods of time, the crews on such flights obviously were very tired and not optimally equipped to meet any emergency should problems develop while operating the airplane.

I would like to relate one incident which illustrates Arrow's attitude in the areas I have discussed. On one occasion, I was a captain on a DC–8 known as a "combi" airplane, which means it is a combination cargo and passenger airplane. Passengers are seated in the rear of the airplane, and forward of the passengers is the bulkhead, and forward of that bulkhead is several pallet positions for cargo. Forward of the cargo positions, or course, is the cockpit for the flight crew.

I received the airplane at Sembach Naval Air Station. The aft lavatories were completely inoperative on the airplane. The only working lavatory was next to the cockpit, which is for the crew. And to use it, the passengers would have to pass through the cargo section where there was no emergency oxygen, no passenger seats and no seat belts available. From Sembach I called Arrow Airways in Miami that I would take the airplane on to Shannon, which was the next stop for fuel, but the aft lavatories must be fixed at that point, or I could not continue.

I had the Arrow agent announce in the terminal to our passengers that there were no facilities aboard the airplane, and they would have to take care of any matter that they needed to prior to boarding. This was an MAC charter flight.

On arrival at Shannon, there had been no arrangements made to fix these aft lavatories. I called Miami flight control several times and ultimately, talked to Mr. Skully. He said he had arranged walkaround oxygen bottles from Shannon repair service to be installed in the cargo section of the airplane and tied to the cargo pallets, and in that the passengers would be brought from the aft section up through the cargo section to use the forward crew lavatory.

I was concerned about this, because since the passengers are not trained to use portable oxygen bottles and there were no facilities for the passengers to sit down and secure themselves in the event of some clear air turbulence, I really questioned the legality of this practice.

Mr. Skully assured me it was acceptable, and since Mr. Skully had been, formerly held a high position with the FAA and was a lot more knowledgeable about the Federal regulations than I am, I accepted his determination and took the airplane.

That was after we experienced another lengthy delay because of an inoperative starter on an airplane. While en route from Shannon to Naval Air Station, Norfolk, we encountered some unpredicted head winds, and we ran short of fuel and had to make an unscheduled fuel stop in Philadelphia.

While en route, I called on the radio and had a phone patch through to flight control in Miami and explained the stiutation to them, told them we would be exceeding our flight time limitations when we reached Philadephia—we would be over 12 hours in 24—and asked them to have another crew available. They assured me they would talk to crew scheduling and make this arrangement.

When we arrived at Philadelphia, there was no replacement crew. I was told by flight control at the time, "If you don't take the flight on to Norfolk, Arrow will lose the MAC contract," because the Arrow MAC reliability record was marginal, and this trip had to be completed. I questioned the wisdom of what flight control was saying, and a dispatcher told me, he said, "Captain, I am not telling you to go, but if you don't, we will certainly lose the MAC contract, and it will affect a lot of jobs."

I talked to my other crew members first and asked what their opinion of it was, how they felt, and we decided to go ahead and take it on to Norfolk, complete the trip and get the military people back to their destination, to their families.

When I arrived, the company then insisted that I ferry the airplane back to Philadelphia for maintenance. I told them the flight time for this period exceeded maximum allowable.

I left Arrow Air for many reasons, but the primary ones are the ones that I have discussed here:. Marginal maintenance, disregard for legal flight time limitations, unrealistic crew time demands. I would be happy to answer any questions from the Senators.

Chairman ROTH. Rather than ask questions now, we will have the testimony of all three and then open the panel to questions.

Mr. Sanjenis, would you proceed?

Mr. SANJENIS. Yes; Mr. Chairman, I first want to thank you for calling these hearings. I think these issues should be aired fully. I thank you for calling them.

Chairman ROTH. Would you pull the microphone up and speak up?

Mr. SANJENIS. Yes; I will. I am presently a training captain on a 747 for a major airline. I am also a qualified DC-8 and 707 captain, which I flew for Arrow Air, and I am also a practicing attorney in New York.

At the request of Barbara Kammerman, deputy chief counsel of the Permanent Subcommittee on Investigations, and Senator William Roth, the chairman, the following is my recollection of the time I was employed as a flight crew member by Arrow Airlines.

I joined Arrow as a pilot in mid-1981. At the time, I had very positive expectations about the maintenance at Arrow, as the owner also owned Batch Air. Batch Air is one of the largest certified FAA maintenance overhaul facilities on the east coast.

I, together with other new employees, was given a conducted tour through the facilities as an indication of the maintenance that we could expect while working for Arrow. The reality turned out to be a far cry from my expectations that day.

The level, amount, and quality of maintenance during my stay at Arrow was the worst I experienced in my years of flying. To this day, I don't have an explanation for it. Pay may have had something to do with it, since most of the mechanics at Batch Air and those that worked for Arrow directly were paid well below union scale. Fully qualified veteran mechanics, therefore, may not have been attracted to Arrow or Batch Air, for that matter.

Nonetheless, both companies are certified by the FAA and must, therefore, presumably meet at least minimum standards. In my opinion, those are the standards that were met, minimum.

The committee asked me to think back to my time of employment with Arrow, to review my log book and to note any incidents that may have occurred to me, or incidents that I knew of. This I have done, and I have answered the questions of the committee pursuant to its subpoena.

The incidents that I happened to recall and document were really the only ones that came to mind. I was not and am not a crusader. I did not keep meticulous and copious notes on what was going on at Arrow. In fact, Arrow was, to me, was just another typical nonsched operation, better than some, worse than others. I might add that in my opinion, it was one of the worst. I am told, however, that in terms of operating procedures and maintenance practices, there are worse still. Nonetheless, I would venture to say that the recurring nature of the not so few incidents that occurred to me indicate only the tip of an iceberg of behavior that might be categorized as egregious.

I don't know why there were so many maintenance delays, so many deferred maintenance items—what we call DMI's—so many incidents. It may just have been circumstance, a lack of parts, a lack of funds, poor management, skewed priorities, et cetera. I do know that I and other crew members were, at times, concerned with the condition of the aircraft that we were asked to fly. Because there was always something breaking down, maintenance delays became part of our normal routine.

As Captain Hood has stated, this, in turn, led to unsafe, in my opinion, duty periods. It was not uncommon to be, at Arrow airlines, to be on continuous duty in excess of 18 hours and, in some cases, over 24 hours. If you are on duty for these periods of time, then one has to have been awake for a much longer period of time. In fact, one of the rules that we wished to negotiate after unionizing the carrier was to limit any on-duty period to 18 hours.

I can categorically state that there is no better way to chance an accident than by the combination of a tired pilot, a maintenance failure and bad weather.

To conclude, problems in flight and on the ground seemed to be a common occurrence at Arrow, problems that other airlines did not seem to experience, at least with the regularity that Arrow experienced them.

We are involved in flying very complex machinery. There are several layers of redundancy designed into the aircraft that we fly. When they are operated, because of excessive DMI's, stripped of these redundancies, the odds against an inflight incident, or worse, are diminished.

We are human; mistakes are made from time to time. We make every effort to keep them to a minimum, because in this business, they can often mean tragedy. Were problems to result, not as a result of error, but because of a purposeful and concerted effort to avoid maintenance to cut costs, this would, in my estimation, be antisocial behavior, if not criminal negligence.

I am not suggesting that this was the case at Arrow. I am simply running through the gamut of possible explanations for the high level of DMI's that I experienced at Arrow.

[At this point, Senator Chiles withdrew from the hearing room.]

Mr. **Sanjenis**. If one multiplies my experience and Captain Hood's experiences by over 100 Arrow pilots, then one has an idea of what flying for Arrow was like. That there were not more incidents or accidents, given the conditions of the airplanes, I think, is testament to the flying skills of its crew members.

Deregulation I believe to be a good thing for the aviation industry, too, Senator. It has opened up new markets; it has offered new opportunities; it has expanded service and lowered prices. But as you said, sir, deregulation of market activities should not mean deregulation of safety. Per contra, because of the very tendency of competitive pressures to incline some airlines, not all, but some airlines to cut costs in all areas, regulation of safety items and maintenance practices should be heightened.

FAA budgets should be increased. There must be more inspectors. New entrants should be closely monitored, et cetera. Unfortunately, this has not been the case. Tragically, we seem as you alluded to, seem to need a crisis before action is taken to do what we should have been doing all along.

We now have the Gander-Arrow disaster and the worst year for aviation accidents in quite some time. We really need to do no more than enforce rules and regulations already in place. Airline managements themselves are supposed to see that their operations conform to at least minimum FAR standards. As a back-up, then, the FAA is supposed to act as a watchdog to ensure at least minimal compliance. I believe that on occasion, the agency has fallen short of this responsibility, probably because of a conflict with its other responsibility, to promote the welfare of the airline industry.

Pilots generally are loathe to call the FAA to report violations. In unionized carriers, reports of deficiencies are made to the union, which, in turn, brings them to the attention of management. Only if the deficiencies go uncorrected would the union report the violation to the FAA. Where there is no union, as in the case of Arrow, reporting directly to the FAA is not generally the accepted practice.

At Arrow, conditions got to the point that many pilots became concerned for the safety of their passengers, as well as their own, and decided to take direct action and contact the FAA. Some chose to call anonymously. I chose to go on record and see the agency in person. I did so in an effort to try to improve the situation at Arrow so as to preclude, to the extent possible, aircraft incidents or accidents. To do otherwise would have been to violate not only my responsibility as captain, but my conscience.

The question may arise: If an airplane is unsafe, why would the pilot fly it? The answer is he would not. The captain is the ultimate authority as to whether or not the airplane is airworthy. But the captain exercising that authority at times does so under severe company pressure to keep that plane flying.

In the nonsched world, now, pilots are often expected to, the term is, "carry" airplanes that in other operations, such as the major scheduled carriers, would not fly until maintenance is performed.

[At this point, Senator Nunn entered the hearing room.]

Mr. SANJENIS. A pilot may find an aircraft full of DMI stickers or even know of unwritten downing gripes, which means unwritten log book writeups that, if entered into the aircraft log, would keep the airplane on the ground until an FAA-approved mechanic repaired the item.

The pilot, often at some far distant point where the company has made no provision for maintenance or lodging for hundreds of passengers, must make his own personal determination as to the airworthiness of the airplane. He knows the company wants him to continue the flight. The passengers don't want to be delayed. He knows if he puts the passengers up in a hotel, the cost involved will probably wipe out the thin margin of profit, and he knows that any contract maintenance is also very expensive.

The pilot, perhaps, is also thinking of, as Senator Glenn pointed out, of safeguarding his job. All these factors, then, tend to balance the safety question. The pilot, therefore, is forced to make a subjective interpretation of the regulations in light of the particular mechanical defect. If he does decide to go, he probably discounts the effect of whatever the problem is, and he really believes that if anything happens because of it, he can handle it.

If something is severely wrong with the aircraft and he thinks it unsafe, then obviously, he will refuse to fly it until it is fixed. But the problem with this approach is that it substitutes one's personal judgment for established, objective safety regulations.

Partly to foster an atmosphere that would make it easier for a pilot to refuse to fly an aircraft he thought unsafe, and for the more traditional wages, benefits and working conditions, I supported the formation of a labor union that would act as the bargaining agent for the flight crew members. The union was voted in on February 21, 1984, despite massive efforts against it by the company.

Soon after the union was certified and upon learning of an inspection of my aircraft during an FAA ramp inspection in Boston, in which they found many things wrong with the airplane, I was temporarily taken off of flight status, allegedly for causing flight delays. It became clear further relationship with Arrow would be counterproductive, and upon being returned into flight status, I resigned to take a position with another airline.

To recap, Federal rules and regulations are designed to provide minimum safety standards. The FAA should see that they are 100-percent enforced. Operations and maintenance procedures that fail to comply with these minimum regulations should not be tolerated. To ensure minimum compliance, a system of continuing spot checks by the FAA should be instituted. The inspector force should be increased specifically for this purpose. They should be especially vigilant of the charter companies, the nonscheduled carriers, new entrants, and financially hard-pressed companies that might be cutting back on maintenance to cut costs.

Additionally, the present international duty time regulations that were written for the piston age are outdated and should be changed. Irresponsible interpretation of these regulations often causes flight crew members to be on duty far in excess of what prudence would dictate. Specific maximum on duty times and rest periods should be specified as they are in the domestic duty time requirements.

Strict enforcement must be the tool that provides that proper incentive to airlines to do the right thing. We must have the determination to not allow any carrier to operate without minimum compliance. There is no excuse to have an airplane flying around with scores of DMI's on a continuing basis. If a carrier is unable to comply, then let that company get out of the flying business and get into some other endeavor in which cost-saving measures won't injure or kill anybody.

Safety cannot and should not be deregulated.

Thank you, sir.

Chairman Roth. Thank you. Next we will hear from Mr. Lycan.

Mr. Lycan. Mr Chairman and members of the subcommittee, my name is George Lycan. I am an airplane pilot. I have been a professional pilot for 24 years. I flew 6 years for the U.S. Marine Corps, including a year of combat flying in Vietnam, and 15 years with "Old" Continental; now 2 years with a nonscheduled airline based in Miami. I have in excess of 11,000 hours of flight time in 23 models of aircraft.

My educational background is in engineering. I have published several papers regarding airline cost analysis and flight standards.

I am presently a captain on the DC-8 for Rich International Airways in Miami, FL.

I will talk today about some problems I have encountered with Rich, where I am currently employed. It should be noted that the problems I will address are not unique to Rich. The management of Rich Air is trying to run a decent company. The keen competitive situation that exists in that area causes all the small, nonscheduled airlines to press the line on flight and duty times, crew training, aircraft maintenance and quality of pilot selection.

There is no real limit to flight crew duty time. for example, I completed a long international trip from Germany to Italy to Germany to Philadelphia, all in one series of trips, and then was told to ferry the plane to Miami. This is known as a tail-end ferry.

This is perfectly legal; I might add perfectly normal in that world, perfectly legal under the Federal Aviation regulations, despite our accumulation of 14½ hours of flight time and over 21 hours of duty time.

I was very tired. I still decided to check with the rest of the crew members and assess whether we could fly the trip. We, at that time, thought we could. On arrival in Miami, I was desperately fatigued, as tired as I have ever been.

I would like to see the FAA establish a duty time maximum in the Federal Aviation regulations of 18 hours for flight crews composed of two pilots and one flight engineers.

Flight crew training in the small nonscheduled airlines is of substantially less quality than on the major airlines.

For example, my ground school instructor was a line copilot on days off. He tried hard, but he had no real training to be an instructor. We had no access to a cockpit procedures trainer or any system mockups. Those are machines that operate the way the hydraulics system would operate or any of the electrical or fuel systems, and they actually are showing fluids that move and valves that open and close so you can understand the systems, which are very intricate. They are hard to understand until you see these things.

The only training aids were an overhead projector and the flight manual.

I would like to see the FAA set higher standards for flight crew training. I think that the cockpit procedures trainer and the system mockups are essential for effective ground schools.

The level of maintenance at Rich Air is adequate. Although I have never been reprimanded for entering maintenance writeups in a logbook, they are definitely not appreciated. This will always be the situation at the small, nonscheduled airlines.

I would also like to see the FAA greatly increase the ramp inspections. The FAA air carrier operations inspectors should run through all the tests and checks pesonally on arrival in the airplane. Only in this way can they discover any inoperative or malfunctioning equipment. I feel it will take more trained FAA people to monitor thse small, nonscheduled carriers.

I will also mention, as the previous gentleman, there is no dialog that exists now between the working flight crews and the FAA. It was told to me by a chief pilot at another airline he was working for, merely going out in the parking lot to see a new car that the principal operations inspector purchased caused him to be fired by the management of another airline. They are out of business now. There is no dialog at all. That should be established.

Flight crew selection procedures should be improved at Rich Air and probably all the other nonscheds. For example, I have had two copilots who barely met minimum levels of performance. I have had three very weak flight engineers.

Chairman ROTH. Very weak what?

Mr. LYCAN. Flight engineers. I think it would improve air safety if the screening of copilot applicants were upgrade. Improved background checking and verification of flight time should be required.

The minimum qualifications for a copilot on turbojet transports for any airline should be: commercial license with multiengine and instrument rating; 500 hours of total time; 200 hours of instrument time; and 100 hours as sole pilot in command.

I have mentioned the FAA access several times. I think their effectiveness would be greatly enhanced if they were not burdened by the built-in conflict of interest. They are charged with the dual responsibilities of promoting and enhancing the health and welfare of the air transport industry while regulating the safety of airways and operators at the same time.

The agency can only do one of these functions well. Although I did receive a subpoena to appear at this hearing, I am pleased to be here. I will answer any questions, provide any background information necessary and cooperate fully.

My motivation is to shed light on the problems that exist and to offer positive, constructive and practical solutions to these problems.

Thank you.

[At this point, Senator Gore withdrew from the hearing room.]

Chairman ROTH. Thank you.

First of all, I want to make it very clear that I commend each of you for being here today. I particularly want to make it clear that I expect, and the subcommittee will be watching, that no adverse action is taken against any person that appears before us as they are required to do. I particularly want to make that clear to the Federal Aviation Administration, that you are here at our invitation and demand. You are under subpoena; you are under oath, and we expect that that will be honored.

One of the things that concerns me is that in listening to the testimony, it seems to me that we have minimum safety regulations that some of your airlines, at least, appear to look upon as maximum. What you are telling me is that even if you meet these minimums, in many cases, that even though a plane may not be unsafe, it is hardly what you call a safe plane; is that correct? Are the standards, the minimum standards sufficiently strict?

Mr. LYCAN. No; they are not. From a company's economic standpoint, they can't afford to be a Santa Claus. Any of these things, or the items, any of the items we have flagged, if they go out of their way to spend time and money addressing it, they are not rewarded by any means in the marketplace. There is no real cash return to them, and they're not going to do it.

The FAA levels need to be raised, the inspections need to be raised, and that's really the only way. Then it would be applied uniformly throughout that part of the world on all equipment.

Chairman ROTH. Yes?

Mr. SANJENIS. Senator, I think it is important that we distinguish that there are two segments in this market. There is the nonscheduled market; the new entrants market; the carrier having financial difficulties. These are the carriers that may be hardpressed and will tend to gravitate toward the minimum standards.

There is the other end of the market, the established major carrier, and you don't have these problems there. In most cases, they're well above the minimum standards in required by the FAA, and they see that as being profitable the long run. They don't have to cancel schedules. Their insurance rates are less. So there are also some incentives for being in excess of the minimum requirements. It is usually the case with the established major airlines.

Chairman ROTH. In just listening to you gentlemen today, what concerns me is that safety should be a No. 1 goal. That should be a goal, not only imposed by the rules and regulations of the Federal Government, but it should be also a requirement of the individual firms.

There is no excuse, in my opinion, for downgrading safety to cut costs. Now, the first question—let me say, I sort of exploded—one of my pet beliefs as one who travels on the airways a great deal on both chartered and nonscheduled, as well as scheduled, is that if the pilot is going to fly the plane, it is perfectly safe. What you are telling me is that you are forced to use subjective judgment. How close can you skirt the line and still satisfy management?

Are you telling me that there is no way you can make your concerns adequately voiced with FAA; that you, except perhaps through a union, that the individual pilot does not feel that he can contact the FAA and get a fair hearing if there is a safety problem?

Mr. SANJENIS. Senator, what I am saying is it is not normally the practice, it is not normally the case, especially if you are with a smaller carrier. In my case, for example, when the company did find out that I was in contact with the FAA, my records were looked into quite carefully. They were scrutinized. All sorts of allegations came forward that I was causing flight delays, all of a sudden, and I was really——

Chairman ROTH. Was that done by your employer or by the FAA?

Mr. SANJENIS. By the employer. Once they found out that I had been having discussions with the FAA, then I was quickly forced to leave the airline.

Chairman ROTH. Has FAA made it clear to the pilots by any means that they want to be contacted whenever there is, in the judgment of a pilot, a serious safety problem? Is there any kind of a program to promote that kind of communication?

Mr. SANJENIS. I think there is, Senator, but there is a hotline number that any pilot or any individual can call if he has some safety-related argument to relate.

But as I say, it is barely used; it is not the forum that is the practice in this industry.

Chairman Roth. Mr. Lycan, did I see you indicating?

Mr. Lycan. Yes, sir; it should be understood that the pilots that are working for, particularly small, nonscheduled airlines are very vulnerable. They are essentially day labor. If they do anything that the management thinks is disruptive at all—and I think they consider these things disruptive—you wouldn't be fired; you were merely not called to fly any trips. You will be sitting at the phone for months and no trips called. You have no contrect; you have no definition of how you work or how you are paid. You are just told that you will receive a certain amount of pay if you fly, and you are only paid for flying. There is no guarantees or minimums.

So you have to be very careful of what you do about things such as these gentlemen are identifying, particularly discussing with the FAA, and you will get no real help with the hotline on an immediate basis because you are talking to someone who is not necessarily involved in the particular area and may not understand the area of concern; maybe in geographic areas, it is not close.

Chairman Roth. Do you think that the hotline could be reorganized in such a way that it could be a useful communication link?

Mr. Lycan. It is possible, but any type of dialog more than what we have now would be helpful.

Chairman Roth. But what I understand you are saying is that basically, the pilots are concerned about "squealing," because that is what it is construed as, either be referring to management or to the FAA, itself. Is that correct?

Mr. Lycan. That is correct.

Chairman Roth. Is that all three of your gentlemen's experience?

Mr. Sanjenis. With respect to the FAA, I think it is perfectly acceptable at any of these companies that one addresses these topics to management. In many cases, I did myself, both in person and in writing to several different people involved, complaining about the excessive levels of DMI's and in various letters, really, telling the company "If you don't change your act here, you are going to have an accident."

Chairman Roth. Have any of you worked for any airlines that make it a safety principle, a goal, and urge you by not only written letters but by conduct, make it clear that they want you to report any safety problem?

Mr. Hood. Yes.

Mr. Sanjenis. Yes, sir. I am working for an airline now, a major carrier, and its philosophy is that safety is the primary goal; the president of the airline, Jim Hartigan, which is United Airlines, has often stated that safety is not only morally right, it is good business, and this is the philosophy of United Airlines, and of other major carriers, as far as I know.

Chairman Roth. So you think that the problem, to isolate the problem with some measure, it is not the scheduled airlines but more the small, nonscheduled?

Mr. Sanjenis. That is my belief, Senator, yes.

Chairman Roth. Would the other gentleman comment?

Mr. Hood. Yes; Mr. Chairman, the company that I worked for just recently put out a letter from Captain Pritchard, who is the senior vice president, flight operations, requesting that the pilots please review the maintenance logs very, very carefully and have a dialog with the flight operations department regarding the maintenance on the airplanes so that anything that comes to light that we are not happy with, that it can be taken care of immediately. In fact, he went so far as to say, "At any time that you don't like the situation, call and the airplane will not move until that situation is rectified through the flight operations department, because safety is paramount," and this is the manner in which they want to operate.

This is different from the smaller carriers from the standpoint that the bottom line, the profit line is the problem that we are talking about in these small carriers. They do not have the resources; they do not have the money nor the facilities that have been put together for years and years in the scheduled carriers throughout the country and the world, in the case of the international carriers, to properly handle maintenance items and problems that are generated on these airplanes as they fly.

Consequently, we end up carrying items, we carry maintenance items on the airplane to a point where we can get it back to a place where the small carrier has a contract maintenance facility or their own facility to repair it.

This is one of the reasons we end up with so many, the inordinate amount of DMI's or deferred maintenance items on these airplanes. The bottom line is, it is expensive to fix these things, and the carriers do not want to spend that money unless they absolutely, necessarily have to.

Chairman ROTH. I will ask one last question, and then I will call on Senator Glenn.

Would you favor some kind of legislation that would prohibit, perhaps make it a crime, if there was retaliation taken against pilots or airline personnel for providing information on safety to FAA? Would that be a helpful factor, in your judgment? Would you each briefly answer that question?

Mr. HOOD. Could you restate your question again?

Chairman ROTH. Would it help to have a Federal law prohibiting, making it illegal, to discriminate or retaliate against pilots and airlines personnel who reported safety violations to FAA?

Mr. HOOD. Regulation of this nature would be helpful from the standpoint that, let's face it: The pilots have mortgage payments to make. They have kids in school, tuition bills to pay. They have the same problems that anybody else has. To lose their job, especially in an environment where jobs are not plentiful, as we had a few years ago when there was no jobs in the the airline business, one has to make some judgment calls.

It's not black and white. There is a lot of gray areas where judgment calls have to be exercised. And in a situation where you have to make the judgment call on an item of safety and you do so in the best interests of yourself and the passengers but it may not be in the best interests of the economics of the company and put yourself in a situation where you could lose your job, whether it's by indirect pressure, as the other captain identified as far as not being called for flights or dismissals, for some other reason, and the kind of recourse that you are talking about could possibly help in that situation.

At the moment, we don't have anything like that in the supplemental or nonschool business for protection. The major carriers have the unions and, in fact, the deficiency in the Federal regulations not only apply to the small carriers, but to the major carriers, as well.

But the unions have gone far beyond the regulations of the FAA as they affect all of aviation and further restrict the flight time, duty time limitations and in other areas for pilots that provide the protection that the Federal regulations do not. So they do have the protections of a union, the major carriers, that can keep your job, but not in the small carriers, sir.

So this type of a hotline or some such instrument as this would be helpful.

Chairman ROTH. Thank you.

Mr. SANJENIS. Senator, I think the law which you speak of certainly couldn't hurt. But I don't think it would be very helpful. As a lawyer, I know that trying to exercise one's rights is very, very expensive, time consuming, and not often is the course that most people choose to do.

If you write in the law perhaps a consumer-oriented provision that would provide attorneys fees to the grievant, maybe that might be better. If one has to go out and engage an attorney and go through the normal legal difficulties and costs, I don't think it would be much use.

Chairman ROTH. Mr. Lycan?

Mr. LYCAN. Well, the large airlines don't need it. As was pointed out, the small airlines are so vulnerable in so many ways that almost no amount of legislation would protect you.

Mr. ROTH. My time is up.

Senator Glenn?

Senator GLENN. Thank you, Mr. Chairman.

Captain Hood, let me make sure the committee fully understandst the allegations you are making today. You are saying that in the 2 years that you worked for Arrow Air, the company often did only marginal maintenance and repair work on the aircraft you flew, often leading to unsafe conditions; is that right?

Mr. HOOD. That's correct.

Senator GLENN. And you are also saying that the company frequently pressured you to fly more hours than you were legally supposed to do by FAA regulation; is that correct?

Mr. HOOD. That is correct.

Senator GLENN. You are also saying that Arrow Air also seemed to be more concerned with making money and keeping contracts than they were with safety for the crew and the passengers; is that correct?

Mr. HOOD. Yes, it is.

Senator GLENN. Have you ever personally witnessed any of these same problems at other airlines? Have you ever heard any other allegations from other pilots that these problems exist at other airlines, either large or small or scheduled or nonscheduled?

Mr. HOOD. Yes, I have. Not in the major carrier that I work for, but I have worked for other small, nonscheduled carriers in the supplemental business that share the same kind of problems that Arrow realized in this industry. There is a very, very thin profit margin, and the corners are cut in areas where they're not recognized or readily seen.

The first one that usually gets cut is the maintenance area. You have to have fuel to fly the airplane. You have to have pilot and flight attendants for the crew. You can't cut corners and get rid of them, but you can cut corners in areas where the public does not see, and it's maintenance.

Senator GLENN. I read some figures at the beginning of my opening statement that before deregulations, airlines devoted 12 to 30 percent of their budgets to maintenance. The figure today averages 7.6 percent. Maybe other costs have gone up, so that percentagewise, it would be expected to go down some; I don't know.

But that is a red flag to me that I think we need to look into in much more depth.

Captain Sanjenis, you indicated on page 2 of your testimony that, and I quote, "I might add that in my opinion, it was one of the worst. I am told, however, that in terms of operating procedures and maintenance practices, there are worse still," referring to Arrow Air.

Could you elaborate on that? Could you give us any examples or provide them at a later date for the committee, either way?

Mr. SANJENIS. Yes, Senator. This is just what one hears while working in this industry. One always is comparing the level of maintenance and horror stories, perhaps, if you will, between airlines, and it just has come to my attention that there are other carriers, mostly in the nonscheduled world, that approach and are similar to Arrow.

Senator GLENN. Could you give us, either now or for the committee at a later date, if you would like to go back and consult your records and other people, any specifics on this on other airlines, so we could take some action on this?

Mr. SANJENIS. Offhand, I have heard that Rich Airlines operated in a similar manner. I have heard that Global Airlines, which I believe has filed for bankruptcy, operated in a similar fashion. I heard that Northeastern Airlines was also of a similar nature. There may be more, but those are the ones that come to mind.

Senator GLENN. You indicated in your testimony also that you finally felt you had to go to FAA and go on the record with this yourself. What was the reaction of FAA? What was the result of your talking to them? What did they do?

Mr. SANJENIS. I don't think they did anything, Senator. I was a bit saddened, because I spoke to them on two occasions. The first occasion was after an incident that occurred to me on the other side of the world, and I thought at that time that the trend in the airline was tending toward unsafe practices, and I went to the FAA.

It was a long, long time ago. Nothing, that I know of, was done about it. The FAA person in charge of the airline was who I had the discussion with, the FAA's attorney and other Arrow pilots, and I don't know if anything concrete occurred as a result of that or not.

The second contact I had with the FAA was a chance meeting in Boston. I believe this is what the company became aware of, at a ramp inspection in Boston.

Senator GLENN. Elaborate on that a little. I have the inspection report here. That was going to be my next question, was to elaborate on the Boston incident.

Mr. SANJENIS. All right.

There had been an Arrow charter schedule to go, I think, somewhere in the Caribbean, and Arrow had the particular misfortune that the charter was comprised of a group of Boston lawyers. [Laughter.]

So the flight was delayed, as usual, interminably, for one reason or another, and the lawyers were getting no answers. So I believe they called the FAA up, and the inspector showed up to do a chance inspection, he called it.

As I happened to come in contact with him, I had been called up out of Kennedy to fill in for this charter, but my airplane, I thought, was in pretty sad shape. It had, I think, something on the order of 15 or 18 DMI's, and while this is perfectly legal, there was nothing that violated the MEL, I questioned the interpretation that the company had as to the policy of continuing these DMI's, sometimes for months at a time.

I don't think that that is the interpretation that should be taken with regard to deferred maintenance items.

At any rate, the inspector boarded my airplane, and asked me several questions about maintenance, about maintenance practices, and I fully cooperated with him, and on that basis, I believe he filed a report and agreed with me that the number of the DMI's even though that they were legal under the minimum equipment list, had been carried far too long and that this was indicative of a maintenance practice that should not be tolerated.

[At this point, Senator Gore entered the hearing room.]

Mr. SANJENIS. I think after that inspection, I think Arrow was scheduled for some sort of inspection. I'm not sure if that occurred or not.

Senator GLENN. Thank you very much. I have a copy of that ramp inspection report here, and I would like to have it entered into the record, Mr. Chairman, if you have no objection to that.[1]

Chairman ROTH. Without objection.

Senator GLENN. And the inspector that made that inspection in his remarks says, "unsatisfactory ramp inspection; recommend additional NATI—" which is National Air Transportation Inspection, "—NATI, emphasis, as soon as practicable; ramp inspection conducted—" where it was conducted. Then he goes through details of this inspection and talked in here about pencil-whipping maintenance discrepancies.

Can you describe for us here what that means? I know what you mean. Can you describe that for our audience here what pencil-whipping maintenance discrepancies mean? Back in some of my past flying days, it dates me, but these were called P-51 fixes back in the days of the Parker 51 pen.

Mr. SANJENIS. Same theory, Senator. What a pencil-whipping fix is—and this happened, I thought, more frequently than should have happened at Arrow—is that one would come in with a gripe, which is a malfunction of one form or another, and often, you would put it in the practice of not even putting a gripe in the log book, and therefore, there is no writeup of it. Certain managements encourage this. This really foils the FAA, because there is no record at all of anything being wrong with the airplane.

---

[1] The report referred to was marked exhibit No. 2 and may be found on p. 281.

But where the items are inserted in the log book, to get the airplane out on schedule, if you write up a radio or something, a typical fix is, "rerack; ground OK." The next pilot then comes up to the airplane. In other words, they do nothing. But they fulfill the requirement of signing off the FAA log book. The next crew that comes looks at the log book, and it is a perfectly legal writeup and fix, and he has no qualms. He is perfectly legal to take the flight.

In some cases, the captain knows; you sort of have this sixth sense after being in this industry, in this business for awhile. You know what has been fixed and what has not been fixed, especially if you keep seeing the same item over and over again, "rerack; ground checks OK" for months, you tend to suspect, well, this sure is breaking down a lot, this radio. But that is a common fix. They do nothing but say they fixed it, and it is perfectly legal for you to take it.

Senator GLENN. My time is getting short, but Captain Hood has his hand up there. Go ahead.

Mr. HOOD. During the time we were operating scheduled service between New York and Miami with Arrow, there, on several occasions, when I was set in an airplane, it had just come in from Miami, and there was a writeup on a particular component of the airplane. Maintenance would come on board and a mechanic who—I knew several of these mechanics, because we worked with them all the time, and he would say, "Captain Hood, we don't have parts. They won't send us; we have asked for them for a long time." He would say, "You know what I have to do. Can I duplicate, 'ground checks OK, request further comment.' "

Senator GLENN. And they would do that and sign it?

Mr. HOOD. Yes.

Senator GLENN. That is absolutely irresponsible. I think you agree.

Just one more, Mr. Chairman. I know my time is over.

Captain Lycan, I haven't had a chance to ask you anything yet. You indicated in your testimony, you said "—it would improve safety if the screening of copilot applicants were upgraded. Improved background checking and verification of flight time should be required," which leads to the question: Have you ever seen evidence of fabrication of records by pilots or copilots?

Mr. LYCAN. It is common knowledge.

Senator GLENN. Can you elaborate on that? To falsify pilot records, that is pretty serious stuff.

Mr. LYCAN. The item that is done all the time is when the pilot is applying at an airline, he enhances the number of hours he has and the different models of equipment. There is very little way for that line to check. There is almost no verification.

Senator GLENN. False line books.

Mr. LYCAN. I knew pilots in the Marine Corps that had two sets of log books. They had the real ones and the ones they trotted out to the airlines. I would like to say, we can help in a certain way in identifying some of these problem airlines that do exist. I think Rich Air went through their dark ages a couple of years ago. I haven't seen anything there, anything that I couldn't fly with. I would like to see better maintenance there, but as I said in there, it is adequate.

But something needs to be done on a variety of different angles to upgrade all the nonsched airlines, maintenance, flight training, the works.

Senator GLENN. Mr. Chairman, my time is up. Thank you.

Chairman ROTH. Thank you.

Senator Gore.

Senator GORE. Thank you very much, Mr. Chairman. Mr. Hood, is it true that your finance called you 4 days before this crash and, during the conversation, stated that there was a problem with one of the engines or one of the start valves and fixing the problem was going to be deferred until after the plane got back from the Middle East to the United States?

Mr. HOOD. That's true. Senator, she called. She was at McChord Air Force Base at the time, waiting for the airplane to come up from Oakland, where it was being—it was undergoing maintenance at World Airways in Oakland. And she called me. And I happened to be here in Washington on crew layover, and she called me. And we had had arrangements, when she returned from this trip, the airplane was to be ferried from Fort Campbell to St. Louis, where they were going to spend 3 days before they repositioned back to McChord to start the last trip of a series of three trips of this movement from the Middle East.

Senator GORE. Could you move that mike just a little bit closer? I am sorry. Go ahead.

Mr. HOOD. And we had had arrangements, where I was going to come to St. Louis and see her during that period of time. She called, and she said, "Can you go to Oakland instead of St. Louis?" I said, "Yes, but why?"

And she said, "Well, it's maintenance problems with the airplane. We have got a bad engine," and she said that, "They're not going to change the engine or fix it now because it would delay the MAC trip, and these MAC trips have to be completed in order to maintain the reliability for the contract."

"So", she said, "They're bringing the airplane up here from Oakland. It is already delayed because they evidently have other maintenance down there. But," she said, "when we get back, we are going to ferry the airplane from Fort Campbell to Oakland to have the engine fixed."

I told her at that time, "Why don't you just quit and get off the airplane now?" And she's a very responsible flight attendant. She said, "No, that would delay; they would have to bring another flight attendant in in order to complete this trip, and that would delay it. But," she said, "I will quit as soon as I get back."

Senator GORE. Did she give you any other information about the nature of the problem with the engine?

Mr. HOOD. I asked her. I said, "Well, what is the problem?" And she said, "Well, it's the same problems that we have always, with the engine backfiring and so forth," and she used the term "compressor stall," which she had been with the airline for the 3 years and is familiar with what compressor stalls are. But that's the only information she gave to me.

Senator GORE. On yet another occasion, she called you from Bangor to say that the engine was shooting flames from the front and rear ends.

[At this point, Senator Glenn withdrew from the hearing room.]

Senator GORE. This was not during the same period of time; this was another flight; is that correct?

Mr. HOOD. Yes.

Senator GORE. According to your testimony, problems of that kind were not uncommon; is that right?

Mr. HOOD. No, they were not uncommon. In fact, I experienced the same type of problems, not with this particular airplane that Arrow lost, but with other airplanes we experienced this type of problems. It was probably one of the more recurring problems, the compressor stalls, on the airplanes that we operated.

Senator GORE. Just to pin down this other matter, she called you from Tacoma on December 8. The plane went to the Middle East, then back to Newfoundland, and the crash occurred on December 12. Is that correct?

Mr. HOOD. That's correct.

Senator GORE. She told you there was a problem with one of the engines and that the company was going to delay fixing that problem until the plane came back to the United States. You then advised her to quit and get off the plane, but she said that she was going to make this one last flight and quit when she returned to the United States.

Four days after that call, the crash took place, is that correct?

Mr. HOOD. That's right.

Senator GORE. You personally have had the experience on several occasions of having problems with the aircraft you were flying for Arrow and when you called it to the attention of the ground crews and the company, you were then told that it would be fixed later, but to "go ahead and fly now" is that correct?

Mr. HOOD. Yes.

Senator GORE. You mentioned one occasion involving the reversing mechanism. When you were having a problem, they had a man spray some WD-40 on it and certified it as airworthy; it that correct?

Mr. HOOD. That's correct.

Senator GORE. Mr. Sanjenis, have I pronounced your name right?

Mr. SANJENIS. Yes, Senator.

Senator GORE. Thank you. You have testified that on one occasion you were one a flight which had to be delayed for maintenance problems in Boston. There was an FAA inspection of the plane, and then right after that, you were taken off flight status for allegedly causing a flight delay; is that correct?

Mr. SANJENIS. That's correct, Senator.

Senator GORE. Do you believe the company was punishing you for causing a safety inspection that delayed the flight?

Mr. SANJENIS. Most definitely, Senator.

Senator GORE. No question in your mind about that?

Mr. SANJENIS. No question about it.

Senator GORE. That is certainly something that we will want to pursue with the officials at the company later on.

Mr. SANJENIS. Incidentally, Senator, I would like to enter in the record, I have here a series of fitness reports and recurrent checks that I was able to get from the company records through a contact I have at the company, because I am sure that when the company gets up here in a short while, that not only my character will be assassinated, but my flying records and my flying qualifications, so I would ask to enter those in the records, if I may.[1]

Senator GORE. I would ask unanimous consent to enter those in the record, Mr. Chairman, if they are not already.

Chairman ROTH. Would you send those up, so that they can be entered?

Senator GORE. At the apropriate time, I will renew my request.

Chairman ROTH. I will anticipate your request.

Senator GORE. Thank you.

Mr. Sanjenis, is it also true that on one occasion, as you were flying to Cancun, one of your engines began going into reverse thrust, and when you landed the plane and told the company maintenance people about it, the solution was to simply wire around the engine and let the plane fly on its other engines; is that correct?

Mr. SANJENIS. That's correct, Senator. I was in weather at high altitude, and one of the outboard engines did actually go into full reverse thrust. This causes a tremendous lurching in the airplane. It tends to want to flip it over to one side.

If this were to occur, and I'm not saying that it did, but if this were to occur on takeoff at full thrust at a low altitude, there is really very little that a crew could do. In my case, being at altitude, we had sufficient time to shut the engine down, go through the required emergency procedures and land.

But the fix was to simply wire it off, and we went on our flight without the use of that reverse.

Senator GORE. You have four engines, right?

Mr. SANJENIS. That's right.

Senator GORE. So you proceeded with three.

Mr. SANJENIS. The engine was working all right; just the reverse——

Senator GORE. I see. So you wired around the reverser.

Mr. SANJENIS. But when you wire one off, you automatically lose the other, because you have to use symmetrical reverse thrust or else the airplane will veer off the runway.

Senator GORE. Here again, the company compromised safety, in your opinion, in order to keep its schedule?

Mr. SANJENIS. Yes.

Senator GORE. Is it true that on another occasion, when you were scheduled to fly a plane from Montego Bay to Los Angeles, an engine fell off while it was being changed. Is that correct?

Mr. SANJENIS. No. No, Senator.

Senator GORE. Excuse me. This was Mr. Hood's experience.

Do you recall that experience, Mr. Hood?

Mr. HOOD. Yes; I do.

---

[1] The information referred to was marked exhibit No. 3 and may be found on p. 285.

Senator **Gore**. It then turned out that the mechanics assigned to fix the engine had no experience at all in fixing those particular engines; is that correct?

Mr. **Hood**. That is what I was told by the maintenance individuals when I reported to the airplane.

Senator **Gore**. So as a result, you and your passengers waited some 36 hours for the engine to be put back on, during which the mechanics, again, dropped the engine on the ground several times; is that correct?

Mr. **Hood**. I don't know about several times. All I know is when I reported to the airplane, it was the first opportunity I had to confront the maintenance people to try and figure out why it took so long to change this engine. A 707 engine can be changed by an experienced crew, engine change crew in anywhere from 48 hours, depending on the equipment and the manpower available.

This one was inordinately long, and when I queried the maintenance people about it one of the maintenance—one of the mechanics there said,

> Well, you wouldn't believe it, but they dropped the engine on the ramp once before they finally got it hung, and there was only one person on the maintenance change or the engine change crew that had ever done an engine change before.

Consequently, when we did leave, we left with the engine running but no generator, no turbocompressor, and it was released under the minimum equipment list out of the main maintenance base at Arrow with an engine change that we had no generator and no turbocompressor working.

Senator **Gore**. I am out of time. I would just summarize briefly by saying that this company's history of ignoring safety problems with components as critical as engines and forcing or pressuring pilots to go ahead and keep the schedule, even though critical maintenance was necessary before the plane could take off is obviously tragic.

We don't know the exact cause of the crash at Gander. One of the scenarios under investigation by the Canadian authorities is engine failure, and I think your statement about this warning 4 days before the crash that there was a problem with one of the engines in that plane is obviously relevant to the inquiry that is now underway there.

I would just like to thank all three of you for your testimony.

Chairman **Roth**. Thank you, Senator Gore.

Senator Cochran.

Senator **Cochran**. Thank you, Mr. Chairman. From the testimony each of you has given, I get the impression that you all feel that there could be improvement in the way the FAA carries out its responsibilities to inspect and examine not only those who operate the aircraft around the country, but the aircraft themselves. There was also some comment when the chairman asked about the possibility of a whistle blower statute that would protect airline pilots and other personnel for reporting violations of safety regulations.

Are there any other changes that you can recommend to the committee in connection with this matter that would help us do a better job of improving the law or the regulations as it relates to air safety? First of all, let's hear from the Rich pilot.

Mr. LYCAN. Yes, sir; sepcifically, there was a task force recently that cleaned up the flight and duty times on domestic flying. What is most applicable for the nonscheduled airlines is the international rules, and particularly, they are all part 121. I think a task force that would be composed of people that are in that part of the world, primarily pilots and dispatchers, crew schedulers, about a five-man task force to come up with recommendations that would go to the administrator who would then follow with the notice of proposed rulemaking, that would tighten up particularly the hours that crews could fly.

Because, for example, it is quite legal for a crew to be out 2 days, as long as he doesn't—I mean up and in the airplane and on and off—if they don't exceed the 12 hours, 3 days, really. You are not going to make your best decisions if you are that tired. That should be cleaned up. There is a lot of areas, and the experts, airline pilots, and dispatchers should get together and come up with something.

Senator COCHRAN. Yes; thank you, Mr. Lycan.

Mr. Hood.

Mr. HOOD. Senator, I am glad you asked that question, because there are two particular areas that are of a great deal of concern to me. No. 1, it doesn't really make any difference whether you have a paying passenger onboard the airplane or not. Fatigue is fatigue. People that sit behind us in the seats back there have no bearing whatsoever on whether we are going to be fatigued or not fatigued and the amount of hours that we fly.

[At this point, Senator Nunn withdrew from the hearing room.]

Mr. HOOD. The regulations that allow us to fly 12 hours and 24 consecutive hours of revenue flying and then change to another set of rules under which we can continue to fly with no paying passengers onboard indefinitely is wrong. It's morally wrong for the agency to allow this, and not only that, it's hazardous, not only to the crew that remains on that airplane that's flying it, but to those people on the ground who are flying over it.

Senator COCHRAN. What about the danger to passengers in other aircraft who are using the same facilities coming into the same airports in the same flight patterns?

Mr. HOOD. Precisely. A scenario: How would you feel about me flying over your home when I have been up for 24 hours and I have flown 18 hours during that 24-hour period, and I am making approach over your home in bad weather, where I should be at the peak of my alertness?

The second item that is of great concern to me is the Federal Aviation Administration has chosen not to or has ignored the fact that the first line of defense and the safety of getting passengers out of the airplane of an evacuation is the flight attendants. When that airplane has to be evacuated on the ground, the flight attendants have to be at their peak.

There is no flight time nor duty time limitations on flight attendants whatsoever. I experienced personally situations at Arrow and other carriers in this industry where a flight attendant would be scheduled to fly from New York to London. They are on the ground in London for a couple of hours while the airplane is cleaned, recatered, turned around, and flown from London back to New York, put in a hotel for 4 hours and then flown from London—or from, excuse me, New York to San Juan.

I have also experienced these same individuals falling asleep on the jump seats at the exits of the airplane on landing. While I have been deadheading on the airplane, and just experiencing and watching what is going on, they are so fatigued that they slept throughout the landing, fallen asleep. If there was an evacuation that was required, I would certainly want the flight attendants to be in a peak and be able to accommodate the evacuation of those airplanes and not being asleep.

They have also fallen asleep trying to serve drinks in the aisle. This is the situation we are looking at in terms of fatigue. And there is no Federal regulations whatsoever that protect the fare paying passenger from having flight attendants operating in this type of condition, and it is being used to the economic benefit of these small air carriers throughout the industry.

The major carriers, like the United's, the Pan Am's, the TWA's have unions that recognize this problem and have negotiated contracts to protect the flight attendants and the paying passenger to see that they have crew members who are alert.

Senator COCHRAN. Have you looked at this statement that the Arrow pilots association provided dated February 18, 1986?

Mr. HOOD. No; I have not.

Senator COCHRAN. This is a statement that I came across reviewing materials in preparation for the hearing.

[At this point, Senator Levin entered the hearing room.]

Senator COCHRAN. One thing that is said in this statement is the following: In reference to the Gander, Newfoundland crash in December, it says, "The crew flying this airplane was highly motivated to do a good job and under no pressure from anyone to fly an airplane that was not safe to fly."

[At this point, Senator Levin withdrew from the hearing room.]

Senator COCHRAN. Would you agree or disagree with that statement in the record?

Mr. HOOD. Knowing all of the crewmembers personally on that airplane, I have the greatest regard and respect for every one of them. They were excellent crewmembers. They were well qualified in every respect, and there is no doubt in my mind that if there was something that they knew specifically that was wrong with that airplane, they wouldn't have taken it.

Senator COCHRAN. Mr. Sanjenis, do you have any comment about that statement? Do you agree or disagree with that statement?

Mr. SANJENIS. I have been away from the company for so long, I really couldn't comment on that statement.

But to followup on Captain Hood's testimony here, I'm sure that you would not want to be on an airplane, having a drink or having a nice flight in the back, if all three pilots up front were sleeping, would you? Well, that's quite common. It's often the case, on some of these long, long safaris, that the cabin attendants would go up and wake the three pilots up front that are supposed to be taking care of your safety.

Senator COCHRAN. Are you involved in any way in the development of litigation against a company or working on behalf of others who might have filed suits arising out of the Gander crash?

Mr. **Sanjenis**. No, sir.

Senator **Cochran**. Mr. Hood.

Mr. **Hood**. No, sir.

Senator **Cochran**. This statement that the committee has been given also contains the following. It refers to, I presume, you. It says:

> We have had to answer for a few former disgruntled employees who left Arrow under less than ideal circumstances. The public should know who these people are and why they no longer work for Arrow. These people are less than honest individuals, who use a tragic event to seek the spotlight for themselves.

[At this point, Senator Levin entered the hearing room.]

Senator **Cochran**. What is your reaction to that statement?

Mr. **Hood**. First of all, I had no intention of ever doing anything like this.

I'm not here for any other reason other than I do not want to see anybody else being put in the same situation that I have been put into. It's wrong. These practices have been going on for a long time, and I feel somewhat responsible myself, as well as every other person who has worked in this industry, who has not taken the responsibility to do something about it. And I guess it's only when the—when it hits home that it makes you realize that you have the personal responsibility to speak out, do something about the situation that is wrong.

I left under good circumstances with Arrow. In fact, the record will show that I was eligible for retirement, and I resigned under good circumstances.

Senator **Cochran**. Mr. Sanjenis.

Mr. **Sanjenis**. I have no ax to grind with Arrow. I left Arrow several years ago. As far as I was concerned, Arrow was a dead issue. Because of the Gander accident and because of the internal documents that I had generated to the company and because of my dealings with the FAA, these, under the scrutiny after the accident, involved my name, and that is how I got involved in this.

I did not volunteer to come here. The news media called me almost incessantly. I was able to avoid the news media, but then your subpoenas have forced me to come here. That's why I'm here. I have no ax to grind, I'll say it again, and that's the reason why I submitted my qualifications as given by Arrow to your committee.

In addition, when I sought other employment, the recommendation that I got from Arrow was a good recommendation. So I think that that statement is purely for the moment.

Mr. **Cochran**. My time has expired. Thank you, Mr. Chairman.

Mr. **Roth**. Thank you.

I just want to raise one or two questions, Mr. Hood, based on the line of questioning by my colleague. As I understand your testimony earlier, your fiancee was concerned about the safety of that airplane and aware that at least one engine was in need of either replacement or repair work; is that correct?

Mr. **Hood**. That is correct. She did not specify which one. She said "one of the engines."

Chairman **Roth**. If she knew that, wouldn't the other flight personnel be aware of that?

Mr. **Hood**. I'm sure they were, but again, I don't know, nor did she elaborate on what the specific nature of the problem was. It could have been something simple that was not a problem with dispatching the airplane; I don't know that.

Chairman ROTH. It is my understanding that the testimony was that she was going to resign subsequently because of her concern.

Mr. HOOD. That is correct. She had made a statement on more than one occasion that she was afraid of the airplane; there were too many things wrong with it, and she was going to resign.

Chairman ROTH. I guess, as I listen to the testimony, that the point that becomes clear is that for differing reasons, economic considerations and job pressure, safety sometimes is cut short.

[At this point, Senator Cochran withdrew from the hearing room.]

Chairman ROTH. That is true on the part of the small, scheduled airlines, and the airlines personnel sometimes are forced into that position to probably fly on not as safe a plane as they would normally like; is that a correct statement?

Mr. HOOD. There is a lot of pressure, direct or indirect.

Chairman ROTH. On both, I suppose, the owners and on the personnel, as well?

Mr. HOOD. That's correct.

Chairman ROTH. So that what we have to seek is some means of ensuring that independent safety does play a primary role, which it does not appear to be doing now, particularly on the nonscheduled airlines.

Mr. HOOD. It always seems to boil down to the bottom line, the money, whether the money is available or not available and whether it is willing to be spent on the quality maintenance of the airplanes.

I can't answer that question, but it seems to be the first place that problems developed in these small areas. Because it is an area that is easily hidden. It's not readily visible to the public or, in some cases, the crew.

Chairman ROTH. Would it make sense—and I think one of you, Mr. Lycan, maybe, so testified—to have stricter standards, for example, either with respect to new airlines or to nonscheduled? In my understanding of your testimony, your personal experiences have been that at least in the regularly scheduled airlines that their safety record is far superior.

So would it make sense to have a stricter standard than now exists for the airlines? Do you want to comment?

Mr. LYCAN. Yes, sir. If, however, we can cause it to be; if the standards are raised; if they're applied uniformly at all the nonscheduled airlines, they're OK. They're competitively at the same point they're at now, but we're better off; the traveling public would be better off.

Chairman ROTH. Safety has to be a primary consideration for the public.

Mr. LYCAN. Absolutely.

Chairman ROTH. Does anybody else care to comment?

[No response.]

Chairman ROTH. Senator Levin.

Senator LEVIN. Thank you, Mr. Chairman. I have just a few questions. I understand Mr. Sanjenis has commented on the FAA issue and taking the problems to the FAA, but I don't know that

Mr. Hood has had an opportunity to do that. I am wondering if you can tell us whether or not you reported what you knew or felt might be true to the FAA? If not, why not?

Mr. Hood. I have never gone to the FAA directly with a problem on the carrier that I worked for.

One thing that is, I think, common in the industry, pilots are very loyal individuals to the companies they work for. If these problems can be worked out in the company, then it is to the benefit all of us, to the pilot and the company. The FAA is a policeman, and the first action is to try and do something within the company.

Quite often, if you brought the attention of a particular problem to the company, the company certainly has to have time in order to address the problem and correct it.

These problems were particular problems that I have had. Our method of bringing it to the attention of the company is to write it up in the logbook as a discrepancy, and we do this on arrival at the destination, and that's the last we see of it, unless we fly that airplane again within another day or a few days.

[At this point, Senator Nunn entered the hearing room.]

Mr. Hood. And then we can determine by looking back at the logbook how it was taken care of, the signoff on that particular item.

In a lot of cases, the signoffs were less than acceptable, in my opinion, and I would bring that to the attention of maintenance, and they said, "Well, we're going to do something about that; we'll take care of it."

That would be the last I would hear of it. I was not involved in any situation that I felt that it was of significance enough to go straight to the FAA with it. I chose to leave the airline for, as I mentioned in my testimony, several reasons. One was the overall condition of the equipment. I was just quite happy to get out of that environment, and I went somewhere else.

Senator Levin. So that the pressure is to not go to the FAA, in effect. The internal pressures, the job pressures are sufficient so that you do not go to the FAA. The lack of maintenance was one of the reasons which drove you out of Arrow?

Mr. Hood. That's correct.

Senator Levin. What about the anonymous call to the FAA, the confidential call which is available, I understand? Mr. Sanjenis made reference to it, or perhaps you did. I would like both of you to comment on that. Is that not an attractive substitute for blowing the whistle on your own employer, to do something which would have your confidentiality assured?

Mr. Hood. It's true, but it's a small business, it's a small industry, and it's not difficult for somebody to determine where this information came from. I think all of us as individuals would try, would rather work this out between ourselves and the company rather than going to the watchdog and create bigger problems possibly than the problems we are dealing with at the time.

If it's a severe nature that the company just refuses to do something, yes; then I think it warrants that type of action.

Senator Levin. Mr. Sanjenis, is the availability of the confidential channel to the FAA a useful one?

Mr. **Sanjenis**. I think it's useful. It enables individuals who otherwise might be afraid to report some violation.

I agree, mostly, with what Captain Hood has been saying, and I follow that same practice myself. Initially, when I saw things that were wrong, and because of the number of incidents that happened to me, I went to the director of operations, the chief pilot, the director of maintenance, and gave them oral requests and written requests.

When I saw nothing happening, when I saw nothing changing, when I kept having incident after incident, I thought it was time to take it to a higher body, and that's what I did.

Senator **Levin**. Do you know of any pilot that has used the confidential channel to the FAA for any particular incidents or airline?

Mr. **Sanjenis**. I don't know anybody in particular.

Mr. **Hood**. To answer your question, no, but I would like to make one statement: That Captain Sanjenis and myself are in a unique position, that we have employment with other carriers, major carriers. There are a lot of pilots in this business who do not have that status, do not have that situation who have to work in supplemental areas for one reason or another. I talked to several of them personally who would like to say something about this issue but won't because of their fear that they if they came before the subcommittee and testified as to things that were going on, it's a very, very small industry, and the chances of them continuing employment or finding employment in this area would be nil. And that's what they're concerned about.

The concern that we're expressing here is not Captain Hood's concern or Captain Sanjenis' concern. It's a concern that's shared by all of us as pilots in the supplemental business and in the scheduled business in the major carriers, but it's more prevalent in the smaller carriers, and people that have to live and work in this kind of environment have to protect themselves, also.

Senator **Levin**. Mr. Chairman, I know that you have commented on the need for prohibitions against retaliation, and other members of the committee have also. I would surely join you and others in any reasonable effort we could make legislatively to protect pilots and others who blow the whistle from retaliation by carriers.

Corners are cut on safety. If it takes legislative action or regulatory action, that ought to be forthcoming. We protect Federal employees against retaliation. We have a whole mechanism to do that. If we have to protect pilots and others in the airline industry against retaliation through legislation or regulation, let's do it. Because we have obviously cut corners on safety, and it is intolerable.

Thank you, Mr. Chairman.

Chairman **Roth**. Thank you, Senator.

Senator **Gore**. Mr. Chairman, I wanted to ask just a couple more brief questions, if that is all right.

Chairman **Roth**. Please proceed.

Senator **Gore**. When I served in the House of Representatives, Mr. Chairman, I had some hearings on jet lag, which the scientists call circadian desynchronosis. There is actually a correlation between the amount of sleep deprivation that a crew has had prior to a fatal crash and the number of fatal crashes that have occurred. Obviously, there are many, many factors that go into fatal crashes, but if you look at this and study it, it is obvious that there is a pattern there.

Since our panel did highlight this morning, I want to just ask a couple more questions on it. I think, Mr. Chairman, that in the recommendations that come out of this hearing, one of the things I would like to see highlighted is a recommendation for tough, new guidelines on the amount of sleep that pilots are entitled to before taking off in a plane. I agree with the statements earlier that it is ridiculous to have a double standard which places limitations on a pilot that is ferrying passengers and then dismisses all limitation when the pilot is deadheading or ferrying a plane back, because it is the same pilot, and the effect on that pilot is going to be the same.

Mr. Sanjenis, did I hear you correctly earlier? I couldn't believe what I heard, you know of instances where all three pilots in the cockpit were so tired that they were sound asleep?

Mr. SANJENIS. It is not uncommon, Senator.

Senator GORE. It is not uncommon?

Mr. SANJENIS. No; it isn't.

Senator GORE. The flight attendant would have to wake them up?

Mr. SANJENIS. On occasion.

Senator GORE. It is interesting. On the first transoceanic flight, the pilot put the plane on automatic pilot and went back to visit with the crew, and then the automatic pilot failed. The plane lurched downward, and the pilot finally, after a heroic effort, made it back to the controls. After this event, they changed the regulations about leaving the controls unattended in the care of the automatic pilot.

Obviously, if we are allowing these schedules to be such that the pilots are dead tired and falling asleep in the cockpit, the purpose of those regulations is being subverted. Is it true that you were often scheduled to fly as much as 18 hours out of 24?

Mr. SANJENIS. Never scheduled to fly more than 12, Senator, but the way, sometimes, they get around that is if the flight control knows, for example, that the particular segment is longer than the requirement, they simply schedule it for 11:59, within the requirements, and you take off. And if it exceeds it, then they call it a wind bust or weather or they could do a whole series of things. But as long as they schedule it below the legal maximum, it is all right.

Senator GORE. Isn't it true that most major airlines only schedule their pilots for about 10 hours of flight time?

Mr. SANJENIS. There is no problem with this area, again, with the major carriers.

Senator GORE. With the major carriers. Do any of you know about the amount of sleep that this crew had prior to the crash? Do you have any information on that?

Mr. HOOD. No, sir; I do not.

Senator GORE. We will try to get that. It was Crete to Cologne, about 4 hours; Cologne to Newfoundland, about 5 hours. We will have to supplement that.

Mr. SANJENIS. Part of the problem, Senator, at least when I was at Arrow, and it may have changed, but the on-duty period began when the wheels were in the well. In other words, when the flight actually began was when they began the logging of the on-duty times.

Often, a pilot will show up, say, to the hangar to get ready for his flight only to be told the airplane is undergoing maintenance. The pilot may sit there all day, 8 hours, 10 hours. In some cases, if they know it's going to be a long delay, they will put you in a hotel, and you get your rest.

But where you have the situation of maintenance says, "Oh, it will be ready in 2 hours," you wait around, you sit around, you drink coffee all day. By the time you actually take your flight and the duty time regulations are supposed to begin, you have been there for 8, 10 hours; you have been up before that. By the time you get to your destination, you may have been up 30-some hours, not uncommon.

Senator GORE. One final question. Mr. Lycan and Mr. Hood, do either of you know of incidents of the kind that were referred to by Mr. Sanjenis, where all of the people in the cockpit will be asleep simultaneously and one of the flight attendants has to wake them up?

Mr. HOOD. I have heard of situations, yes.

Mr. LYCAN. It's happened a couple of times.

Senator GORE. Thank you, Mr. Chairman.

Chairman ROTH. Thank you.

Thank you, gentleman.

Mr. Rinzel has a couple of questions.

Mr. RINZEL. Mr. Chairman, under rule 14 of the subcommittee rules the parties that have an interest in a matter before the subcommittee may submit to the subcommittee for its consideration proposed questions of witnesses who may appear. Arrow Air's attorney has submitted a list of some 10 questions, approximately, to be directed to Captain Sanjenis and one question to Captain Hood. However, I have received a note from the attorney indicating that Arrow Air was withdrawing the request that those questions be asked. I wanted to note that for the record.

I also have some question for Captain Sanjenis.

Captain Sanjenis, was the management at Arrow aware of the poor conditions of Arrow's planes, and if you say they were, how do you know that?

Mr. SANJENIS. Well, they were, Senator, because I told them, on several occasions. I told the director of operations. I told the director of maintenance, and I wrote several letters to the chief pilot. So on that basis, they were aware of it.

Mr. RINZEL. Were you ever present at meetings where members of management were also in attendance and where pilots discussed complaints about maintenance and the conditions of a plane?

Mr. SANJENIS. Yes; on occasion, management would hold open forum meetings and also was part of a delegation of pilots interested in forming this labor association. We would get together from time to time, and at those meetings, the open forum, these questions would arise as to the excessive DMI's, and always, the response was that, "Well, it's news to us," or, "We will attempt to fix and correct the problems."

Mr. RINZEL. Was Mr. Skully or Mr. Batchelor ever present at any of those meetings?

Mr. **Sanjenis**. I left, I think, just at the time Mr. Skully was arriving at the airline, but Mr. Batchelor was present at some of those meetings.

Mr. **Rinzel**. Why would Arrow management not have been as equally concerned about the financial well-being of their company, and, as a result, kept their planes in tiptop maintenance conditions?

Mr. **Sanjenis**. I'm not sure, Senator. I think that maybe the answer was perhaps skewed priorities or maybe they weren't in the business for the long run. This is conjecture on my part. But I think the whole thrust of Arrow was different from that of a legitimate major carrier, say, like United.

If Arrow was set up as an adjunct to some of the other Batchelor Enterprise businesses, like International Air Leases, which leases aircraft all over the world, or like Batch Air, which is the largest certified FAA maintenance repair station on the east coast, Arrow could be set up, and again, this is conjecture, to service these companies, to show little or no profit, thereby keeping labor in check, and being able to upstream, and report losses for income tax purposes.

In short, I don't think Arrow was designed to be in the business for the long term, and that's maybe why there wasn't that much emphasis.

Mr. **Rinzel**. You are aware that Arrow obtained most of its planes through leasing arrangements with another Batchelor enterprise?

Mr. **Sanjenis**. Oh, that's very definitely the case, and I think that is part of the situation here. I'm not sure what the lease rates were, and I don't know if they were arm's length transactions or not, but Arrow Airlines served, to my mind, as a depository for International Air Lease aircraft.

An aircraft is much more valuable if it's kept in use with a 121 carrier, because supposedly, in that carrier, it is going to be receiving 121 maintenance rather than having an airplane just sit someplace.

So therefore, it made the International Air Lease aircraft that were on lease to Arrow, on Arrow's certificate temporarily, much more valuable. I believe aircraft were coming and going out of Arrow on a constant basis, and as leases would come up or as sales were found for the aircraft, they were pulled from Arrow and sold or leased.

This disrupted schedules and with no regard, really, to the level of pilot employment that was required and things of that nature.

Mr. **Rinzel**. Batch Air is another Batchelor enterprise that repairs planes, including Arrow planes?

Mr. **Sanjenis**. Batch Air is a maintenance facility, and many of the Arrow aircraft were sent to Batch Air. Of course, Arrow being a separate corporation, it would have to pay Batch Air for any services that were rendered.

Mr. **Rinzel**. I have no further questions, Mr. Chairman. I would like to request introduction of a letter from Stewart A. Goldstein to one of or staff members. Mr. Goldstein is an attorney which represents the Arrow Air Pilot Association. Subcommittee staff was in contact with the Arrow Air Pilot Association since the beginning of this investigation. The letter includes comments of concern about the issue of retaliation against pilots who make complaints. Since that issue has come up, I would request that this letter be added to the record at the appropriate place.[1]

Chairman ROTH. Without objection.

Thank you, gentlemen. We appreciate your being here. We may have further questions at a later time. Thank you very much.

Mr. HOOD. Thank you.

Mr. SANJENIS. Thank you.

Mr. LYCAN. Thank you.

[The prepared statements of Messrs. Hood, Sanjenis, and Lycan follow:]

---

[1] The letter referred to was marked exhibit No. 4 and may be found on p. 300.

PREPARED STATEMENT OF DANIEL E. HOOD

My name is Daniel E. Hood. I am a professional pilot with 23 years of experience in aircraft ranging from single-engine piston to multi-engine jet airline transport aircraft. I hold an FAA Airline Transport Pilot Certificate with ratings on the Boeing 707 and 720; the Douglas DC-8, the Convair 240, 340, 440 and the IA-Jet.

I have accumulated over 16,000 hours of flight time which includes over 4,000 hours pilot-in-command of four engine jet transports such as the Boeing 707 and DC-8. In addition, I hold a current Flight Engineers Certificate with a Turbo-jet rating and a Navigators Certificate. I also hold a Certified Flight Instructors Certificate with ratings in single/multi-engine land, sea and instruments. I have held many positions of responsibility in aviation airline management including Vice President and Director of Operations, Director of Flight Control, Check Airman and Training Captain on the Boeing 707 and DC-8. I am currently a pilot for a major U.S. international scheduled carrier.

I worked as a pilot for Arrow Air from April 1983 until April 1985. The last three months of my employment -- February through April -- I was on a personal leave of absence. I resigned in April, 1985.

I am prompted to speak out about my experiences at Arrow Air because of the crash of an Arrow Air DC-8 in Gander, Newfoundland in December, 1985 which took the life of my fiancee' who was a crew member aboard that aircraft.

During my employment at Arrow, I found Arrow's attitude toward maintenance to be one of performing only marginal maintenance on its airplanes. Arrow would use the Minimum Equipment List, which sets forth the minimum equipment required for certain flight conditions, as the maximum level of maintenance. This resulted in Arrow deferring maintenance on numerous items for long periods of time. Pilots would regularly be confronted with several inoperable items on aircraft and the level of safety redundancy built into the aircraft was at a lower level than that with which I, at least, was comfortable.

Even when Arrow purported to "fix" an item, it often did so in the manner which would enable the aircraft to depart quickly, rather than taking measures to really cure the problem.

For example, Arrow's 707 planes had a history of problems with sticking reversers. These bushings in the reverser mechanisms are supposed to be round. As the aircraft ages, the bushings become oval-shaped and do not roll properly. At this point, the bushings should be replaced. However, if the tracks are heavily lubricated, the worn bushings will operate again for a short time. Inevitably, when the lubrication wears off, they will stick again. Arrow's solution to the sticking reverser problem was always to lubricate the reverser tracks and send the plane on. I was once so annoyed with this recurring problem -- at the time I was sitting with a plane with three sticking reversers -- that I called Mr. Skully, Arrow's Senior Vice-President of Maintenance and Operations, to complain. As usual, the only "fix" Arrow performed was to send a mechanic to lubricate the tracks.

As another example, the air conditioners on the 707's freon system continually malfunctioned. I remember this problem was particularly acute on aircraft number 707PD -- which Arrow pilots nick-named "pre-death" because that aircraft always had maintenance problems. It was common for Arrow pilots to log items as defective, have them signed off by maintenance personnel, and have them fail again.

Arrow's periodic maintenance was also deficient. On one occasion, an aircraft I was flying lost all hydraulic fluid in its utility system so the crew had to rely on the emergency extension procedure of the landing gear. In this case, I was unable to lock down the right main landing gear manually. Luckily, I was able to use some residual return fluid from the main landing gear after manual extension and the engine driven pumps to bump the right gear over the locked position before that fluid was also lost overboard. When maintenance checked the emergency landing gear extension component, they found that it was bent and corroded, preventing the crew from being able to manually lock the gear in a down position. The presence of corrosion and condition of the manual extension system, means that the emergency system had not been periodically checked as it should have been. Subsequently, when an emergency arose where the manual system was needed, the aircraft was not equipped to meet that emergency.

Another distressing situation at Arrow was its disregard for the Federal Aviation Regulations with respect to pilot flight time limitations. The regulations provide that, on international flights a crew can only fly 12 hours in any consecutive 24 hour period. On more than one occasion, I informed Arrow Flight Control that I would exceed the legal flight time limitations if I continued to fly past a certain point, and requested a replacement be available at the next stopping place. When I arrived at the stopping place, no replacement was available and a planeload of passengers was waiting to go on. At that point, the dispatcher would tell me that if I did not continue to fly, Arrow's MAC contracts would be cancelled and everyone at Arrow would lose their jobs. This type of pressure on pilots is intolerable. Pilots should not have to choose between violating the Federal Aviation Regulations or sinking their companies. The company should be responsible to making replacement crews available or take the responsibility upon themselves to suffer the consequences.

Even when Arrow did not pressure pilots to transgress the applicable flight time regulations, the company put unrealistic crew duty time demands on its pilots, flight engineers and flight attendants which resulted in them operating in a fatigued and potentially unsafe environment. Sixteen to eighteen hour work days were typical, and I personally had some work days extending over 20 hours. This situation often occurred in instances where crews had flown the maximum hours allowed by law, and were then asked by Arrow to ferry planes -- which means to reposition the aircraft without passengers in a different location for maintenance or flight. The FAA does not regulate the pilots' flight time for ferry flights which are considered for the carriers benefit. That means that the time you fly without paying passengers is not counted in determining how many hours in 24 you are flying. While Arrow did not violate the law by scheduling crews for ferry flights after they had already had long working periods, the crews on such flights obviously were very tired, and not optimally equipped to meet any emergencies should problems develop while operating the aircraft.

I would like to relate one incident which illustrates Arrow's attitudes in the areas I have discussed. On one occasion, I was the Captain on a plane known as a "combi aircraft," which means it was a combination cargo and passenger aircraft. The pilots and flight engineer were located in the front of the plane, the cargo section in the middle, and the passengers were seated in the back. When I got the plane, the aft lavatories were inoperative. The only working lavatory was next to the cockpit,and to use it, passengers would have to pass through the cargo section where no emergency oxygen, seats, or seat belts were available.

I called and informed Arrow's Miami Flight Control that I would take the aircraft to the next scheduled stop but that the aft lavatories must be fixed at that time. I had the Arrow agent announce in the terminal that no facilities would be available on the airplane. This was a MAC charter flight.

On arrival at the next stop, no arrangements had been made to fix the lavatory. I called Miami and spoke to Mr. Skully. He said he had arranged walk-around oxygen bottles to be tied to the pallets in the cargo section and it would be permissible for the flight attendants to bring the passengers through the cargo area to the forward lavatories. I was concerned about this since the passengers were not trained to use portable oxygen bottles, and questioned the legality of this practice.

Mr. Skully assured me it was acceptable. Since Mr. Skully had formerly held a high position with the FAA and should have been very knowledgeable about legal requirements, I accepted his decision and took the aircraft on, after first experiencing a maintenance delay due to an inoperative starter.

En route, we encountered a shortage of fuel due to excessive head winds, and made an unscheduled stop. I had radioed ahead while in flight to Miami and requested a replacement be available at the next stop because I would be illegal to proceed due to FAA flight time limitations.

When we arrived, no replacement was available. I was told by Flight Control that if you don't take the flight on to the next destination, Arrow would lose its MAC contract because the Arrow MAC reliability record was marginal and this trip had to be completed. I questioned the wisdom of what flight control was saying. The dispatcher said, "I'm not telling you to go, but if you don't, we will certainly lose the MAC contract and it will affect a lot of jobs."

I took the aircraft on to its intended destination. When I arrived, the company then insisted that I ferry the aircraft elsewhere for maintenance. My total flight time for this period exceeded the maximum allowable.

I left Arrow for many reasons, but the primary ones were the ones I discussed here -- marginal maintenance, disregard for legal flight time limitations, and unrealistic crew duty time demands.

I would be happy to answer any questions the Senators may have.

PREPARED STATEMENT OF MICHAEL SANJENIS

At the request of Barbara Kammerman, Deputy Chief Counsel of the Permanent Subcommittee on Investigations, Senator William V.Roth, Jr. Chairman, the following is my recollection of the time I was employed as a flight crew member by Arrow Airlines.

I joined Arrow Air (Arrow) as a pilot in mid-1981. At the time I had positive expectations about the maintenance at Arrow as the owner also owned Batch Air, one of the largest certified FAA maintenance overhaul facilities on the East Coast.

I, together with other new employees were given a conducted tour through the facilities as an indication of the maintenance we could expect while working for Arrow. The reality turned out to be a far cry from my expectation. The level,amount and quality of maintenance during my stay at Arrow was the worst I experienced in my years of flying. To this day I don't have an explanation for it. Pay may have had something to do with it since most of the Mechanics at Batch Air and those that worked for Arrow directly were paid well below union scale. Fully motivated veteran mechanics therefore may not have been attracted to Arrow or Batch Air. Nonetheless, both companies are certified by the FAA and must therefore presumably meet at least minimum standards. In my opinion those are the standards that were met.

The Committee asked me to think back to my time of employment with Arrow, to review my log book and to note any incidents that may have occurred. This I have done and have answered the questions of the Committee pursuant to its subpoena.

The incidents that I happened to recall and document were the only ones that came to mind. I was not and am not a crusader. I did not keep meticulous and copious notes on what was going on at Arrow Air. In fact Arrow was just another typical "non-sched" operation, better than some, worse than others. I might add, that in my opinion it was one of the worst. I am told, however, that in terms of operating procedures and maintenance practices,there are worse still. Nonetheless, I would venture to say that the recurring nature of the not so few incidents that occurred to me indicate only the tip of an iceberg of behavior that might be categorized as egregious.

I don't know why there were so many maintenance delays, so many deferred maintenance items (DMI's), so many incidents. It may have just been circumstance, a lack of parts, a lack of funds, poor management, skewed priorities, etc. I do know that I and other crew members were at times concerned with the condition of the aircraft we were asked to fly. Because there was always something breaking down maintenance delays became part of our routine. This in turn led to unsafe duty periods. It was not uncommon to be on continuous duty in excess of 18 hours and sometimes over 24 hours. If one is on duty for these periods of time then one has been awake for a much longer period of time. (In fact one of the rules we wished to negotiate after unionizing was to limit any on duty period to 18 hours). I can categorically state that there is no better way to chance an accident than by the combination of a tired pilot, a maintenance failure and bad weather. To conclude, problems in flight and on the ground seemed to be a common occurrence at Arrow - problems that other airlines did not seem to experience at least with the regularity that Arrow experienced them.

We are involved in flying complex machinery. There are several layers of redundancy designed into the aircraft we fly. When they are operated, because of excessive DMI's, stripped of these redundancies, the odds against an inflight incident or worse are diminished.

We are human. Mistakes are made from time to time. We make every effort to keep them to a minimum because in this business they can often mean tragedy. Were problems to result, not as a result of error, but because of a purposeful and concerted effort to avoid maintenance to cut costs, this would in my estimation be anti-social behavior, if not criminal negligence. I am not suggesting that this was the case at Arrow. I am simply running through the gamut of possible explanation for the high level of DMI's experienced at Arrow.

If one multiplies my experiences by over 100 Arrow pilots, one has an idea of what flying for Arrow was like. That there were not more incidents or accidents, given the conditions of the airplanes, is testament to the flying skills of its crew members.

Deregulation I believe to be a good thing for the aviation industry. It has opened up new markets, offered new opportunities, expanded service and lowered prices. But deregulation of market activities should not mean deregulation of safety. Per contra, cause of the very tendency of competitive pressures to incline airlines to cut costs in all areas, regulation of safety items and maintenance practices should be heightened. FAA budgets should be increased. There must more inspectors. New entrants should be closely monitored, etc. Unfortunately, this has not been the case. Tragically we seem to need a crisis before action is taken to do what we should have been doing all along. We now have the Gander Arrow disaster and the worst year for aviation accidents in quite some time. We really need do no more than enforce rules and regulations already in place. Airline managements themselves are supposed to see that their operations conform to at least minimum FAR standards. As a backup the FAA is supposed to act as a watchdog to ensure minimal compliance. I believe that on occasion the Agency has fallen short of this responsibility probably because of a conflict with its other responsibility, to promote the welfare of the airline industry.

Pilots generally are loathe to call the FAA to report violations. In unionized carriers, reports of deficiences are made to the union which in turn brings them to the attention of management. Only if the deficiences go uncorrected would the union report the violation to the FAA. Where there is no union, reporting directly to the FAA is not generally the accepted practice.

At Arrow conditions got to the point that many pilots became concerned for the safety of their passengers as well as their own and decided to take direct action and contact the FAA.

Some chose to call anonymously. I chose to go on record and see them in person. I did so in an effort to try to improve the situation at Arrow so as to preclude to the extent possible aircraft incidents or accidents. To do otherwise would have been to violate not only my responsibilities, but my conscience.

The question may arise. If an airplane is unsafe why would the pilot fly it? The answer is he would not. The captain is the ultimate authority as to whether or not the airplane is airworthy. But the captain exercising that authority at times does so under severe company pressure to keep that plane flying. In the "non sched" world pilots are often expected to "carry" airplanes that in other operations would not fly until maintenance is performed. A pilot may find an aircraft full of DMI stickers or even know of unwritten "downing gripes" i.e. unwritten log book write-ups that if entered into the aircraft log would keep the airplane on the ground until an FAA approved mechanic repaired the items.The pilot, often at some far distant point where the company has made no provision for maintenance or lodging for hundreds of passengers, must make his own personal determination as to the airworthiness of the airplane. He knows the company wants him to continue the flight. The passengers do not want to be delayed. He knows if he puts the passengers up in a hotel the cost involved will probably wipe out the thin margin of profit and he knows that any contract maintenance is also very expensive. The pilot perhaps is also thinking of safeguarding his job. All of these factors then, tend to balance the safety question. The pilot therefore is forced to make a subjective interpretation of the regulations in light of the particular mechanical defect. If he decides to go he probably discounts the effect of whatever the problem is and he really believes that if anything happens, he can handle it. If something is severely wrong with the aircraft and he thinks it unsafe then obviously he will refuse to fly it until it is fixed. The problem with this approach is that it substitutes one's personal judgment for established objective safety regulations.

Partly to foster an atmosphere that would make it easier for a pilot to refuse to fly an aircraft he thought unsafe, and for the more traditional wages, benefits and working conditions, I supported the formation of a labor union to act as bargaining agent for the flight crew members. The union was voted in on February 21, 1984 despite massive efforts against it by the company.

Soon after the union was certified and upon learning of an inspection of my aircraft during an FAA ramp inspection in Boston, I was temporarily taken off flight status allegedly for causing a flight delay. It became clear that further relationship with Arrow would be counterproductive and upon being returned to flight status I resigned to take a position with another airline.

To recap, Federal rules and regulations are designed to provide minimum safety standards. The FAA should see that they are 100% enforced. Operations and maintenance procedures that fail to comply with these minimum regulations should not be tolerated. To ensure minimum compliance a system of continuing spot checks by the FAA should be instituted The inspector force should be increased specifically for this purpose. They should be especially vigilant of the charter companies, non-scheduled carriers, new entrants, and financially hard pressed companies that might be cutting back on maintenance to cut costs.

Additionally, the present international duty time regulations (written for the piston age) are outdated and should be changed. Irresponsible interpretation of these regulations often cause flight crew members to be on duty far in excess of what prudence would dictate. Specific maximum on duty times and rest periods should be specified as in the domestic duty time regulations.

Strict enforcement must be the tool that provides the proper incentive to airlines to do the right thing. We must have the determination to not allow any carrier to operate without minimum compliance. There is no excuse to have an airplane flying around with scores of DMI's on a continuing basis. If a carrier is unable to comply, then let that company get out of the flying business and get into some other endeavor in which cost saving measures won't injure or kill anybody.

Safety cannot and should not be deregulated!

PREPARED STATEMENT OF GEORGE LYCAN

Mr. Chairman and Members of the Subcommittee; my name is George Lycan. I am an airline pilot. I have been a professional pilot for 24 years. I flew six years for the United States Marine Corps (including a year of combat flying in Vietnam), fifteen years with the "old" Continental, and 2 years with a non-scheduled airline based in Miami, Florida. I have in excess of 11,000 hours of flight time in 23 models of aircraft (including military jets and helicopters, military and civilian jet transports, various training planes, civilian light planes, and gliders). My educational background is in engineering and I have published several papers regarding airline cost analysis and flight standards. I am presently a Captain on the DC-8 for Rich International Airways in Miami, Florida.

I will talk today about problems I have encountered at Rich where I am currently employed. But it should be noted that the problem areas I will address are not unique to Rich. The management of Rich is trying to run a decent company. The keen competitive situation requires all the small non-scheduled carriers to press the line on flight and duty times, crew training, aircraft maintenance, and quality of pilot selection.

There is no real limit to flight crew duty times.

For example, I completed a long international trip from Germany to Italy to Germany to Philadelphia, and then I was told to ferry the plane to Miami. This is known as a "tail end ferry". This was perfectly legal under the Federal Aviation Regulations despite our accumulation of 14 1/2 hours of flight time and over 21 hours of duty time.

While I was *very* tired, I decided that we could operate the trip safely. But on arrival in Miami, I was desperately fatigued.

I would like to see the FAA establish a duty time maximum of 18 hours for flight crews composed of 2 pilots and one flight engineer.

Flight crew training in the small non-scheduled airlines is of substantially less quality than on the major air lines.

For example, my ground school instructor was a line co-pilot who tried hard but had no real training to be an instructor. We had no access to a cockpit procedures trainer or any system mockups. The only training aids were an overhead projector and the Flight Manual.

I would like to see the FAA set higher standards for flight crew training. A cockpit procedures trainer and the system mockups are essential for an effective groundschool.

The level of maintenance at Rich Air is adequate.

While I have never been reprimanded for entering maintenance write ups in the log book, they are definitely not appreciated. This will always be the situation at the small non-scheduled airlines.

I would also like to see the FAA greatly increase the ramp inspections. The FAA Air Carrier Operations Inspector's should run through all the tests and checks, personally, upon arrival at the plane. Only in this way can they discover inoperative or malfunctioning equipment. I feel that it will take more trained FAA people to properly monitor the small non-scheduled carriers. A dialogue should be established between the FAA and the working flight crews (none exists at this time.)

Flight crew selection procedures should be improved at Rich Air. For example, I have had 2 copilots who barely met minimum levels of performance. I have had 3 very weak flight engineers.

I think that it would improve air safety if the screening of copilot applicants were upgraded. Improved background checking and verification of flight time should be required.

The minimum qualifications for a copilot on turbojet transports for any airline should be:

1. Commercial license multi-engine with an instrument rating.
2. 500 hours total time.
3. 200 hours instrument time.
4. 100 hours as sole pilot in command.

I have mentioned the FAA several times in my statement. Their effectiveness would be greatly enhanced if they were not burdened by a built-in conflict of interest. They are charged with the dual responsibilities of promoting and enhancing the health and growth of air transport while regulating the safety of airways and operators at the same time. The Agency can only do one of these functions well.

While I did receive a subpoena to appear at this hearing, I am pleased to be here. I will answer any questions, provide any background information necessary, and cooperate fully. My motivation is to shed light on the problems that exist and to offer positive, constructive, and practical solutions to these problems.

Chairman ROTH. The subcommittee will now hear testimony from Arrow Air management. Mr. Batchelor is chairman of Arrow Air, and Mr. Skully is the senior vice president of operations and maintenance of Arrow Air. Mr. Batchelor also owns and controls other aviation companies involved in such activities as aircraft leasing and aircraft repair and maintenance.

Mr. Skully has been senior vice president, operations and maintenance, for Arrow Air since 1984. From 1978 until 1984, he had the same title at Air Florida. Before that, he had a long career with the Federal Aviation Administration, and his final position there was director, Flight Standards Service.

Gentlemen, as you know, all witnesses are required to take the oath, so will you please stand and raise your right hands?

Do you swear the testimony you will give before this subcommittee will be the truth, the whole truth, and nothing but the truth, so help you God?

Mr. BATCHELOR. I do.

Mr. SKULLY. I do.

Chairman ROTH. Please be seated. I would appreciate it if you would each introduce yourself and who you are accompanied by.

Mr. BATCHELOR. I am George Batchelor. This is Tom Connaughton.

Chairman ROTH. If you could pull the microphone closer to you.

All right, Mr. Skully, which one of you is Mr. Skully?

Mr. SKULLY. I am Richard Skully.

Chairman ROTH. Would you introduce yourself.

Mr. CONNAUGHTON. I am Tom Connaughton, counsel for Arrow Air.

Chairman ROTH. Mr. Batchelor, would you please proceed with your prepared statement?

Mr. BATCHELOR. Yes, sir. I have previously submitted the written statement to the committee.

Mr. Chairman, I am George Batchelor. I'm chairman of Arrow Air.

[At this point, Senator Glenn entered the hearing room.]

TESTIMONY OF GEORGE BATCHELOR, CHAIRMAN, ARROW AIR, ACCOMPANIED BY TOM CONNAUGHTON; AND RICHARD SKULLY, SENIOR VICE PRESIDENT, OPERATIONS AND MAINTENANCE

Mr. BATCHELOR. It is with profound regret and sorrow that Arrow Air appears before this committee today. The tragedy in Gander, the loss of the servicemen and our crew has been a very heavy burden on all the people at Arrow.

As chairman of Arrow, I have directed that every effort be made to cooperate with this subcommittee. I have requested similar cooperation from all Arrow employees in our dealings with the Canadian Safety Board, the United States FAA, and the United States National Transportation Safety Board.

Arrow wishes it had more information on the cause of the accident, but we do not. There has been no determination that we know of at this time. We have received very little information from the Canadian team that's now doing the investigation of the matter.

Because of my ongoing management responsibilities and commitments in International Air Leases, the aircraft leasing company, and in Batch Air, I have not been involved in the day-to-day operations of Arrow Air at any time except for a short period in early 1984.

During the entire existence of Arrow Air, I have always sought to find the best talent available in the airline industry to manage and run the airline on a day-to-day basis. In early 1984, during a change in management, I became president of Arrow Air and involved myself in the daily management for a short period of time. At that time, I hired Mr. Skully, sitting on my left, who has had a long and distinguished career with the FAA and with a newly scheduled airline in both operations and maintenance.

I would like to impress on the subcommittee the utmost concern we have, as well as our other companies, regarding proper maintenance and the importance of air safety. I would like to comment that the best maintenance is the cheapest maintenance in the long term. There are no short cuts in maintenance.

People who run Arrow Air are airline people first, business people second, from the chief executive officer on down. The No. 1 consideration of any pilot or any person associated with an airline is the safe operation and proper maintenance of the aircraft. To suggest that an economic consideration supersedes the proper performance of airline operation and maintenance is absurd.

Since the Gander tragedy, there have been many reports from sources that claim to have specific knowledge of Arrow's operations and maintenance policies and history. I would urge the subcommittee to objectively evaluate all these claims that people are making about us, and I extend to the committee or the subcommittee my complete cooperation and assistance in doing so.

At the present, I am concerned that the tremendous emotional issues involved with the Gander tragedy not be used to allow a one-sided and a biased presentation against Arrow. In stating this concern, I also state that Arrow is not a perfect airline and would never claim to be.

I do not believe there is a perfection in this industry. We have made mistakes. However, Arrow has tried extremely hard to do a good job and to do its best.

I sincerely believe that Arrow's operations would compare favorably with those in the industry. Mr. Chairman, notwithstanding the agony of second-guessing the tragedy, it is my hope and the hope of all employees of Arrow that we honor the memories of our crew as well as the memories of the servicemen in considering the issues here today with candor and sincerity and objectivity.

I appreciate this opportunity to appear before you, and I will do my best to answer all your questions.

Thank you.

Chairman ROTH. Mr. Skully.

Mr. SKULLY. Yes, Mr. Chairman.

I'm Richard Skully, and I've submitted a statement for the record. I would like to summarize it at this time.

I have been in aviation all of my adult life and served as a pilot during World War II and spent 31 years with the FAA. I joined Arrow Air in February 1984 as senior vice president of operations and maintenance. During these 2 years, Arrow has been subjected to a number of FAA inspections in addition to continued surveillance by the site inspectors. We have worked with FAA and have implemented their constructive recommendations, and I believe that Arrow Air operates a safe airline and has a group of highly professional employees.

Mr. Chairman, I will be happy to try to answer your questions.

Chairman ROTH. Mr. Batchelor, Arrow has been cited a number of times for violations of Federal aviation regulations. Last year, it paid a civil penalty in settlement of several cases of $34,000.

One of these cases involved Arrow's failure to maintain adequate records relating to aircraft overhaul and parts. Why didn't Arrow maintain such records as required by law?

Mr. BATCHELOR. If I may, I would like to ask Mr. Skully, whose department falls into that area, to answer, sir.

Chairman ROTH. Let me ask you this question. Were you aware of that fact?

Mr. BATCHELOR. Yes, sir, I was, after the inspection.

Chairman ROTH. In operating, and you are chairman and chief executive, what do you feel is your responsibility with respect to safety?

Mr. BATCHELOR. I think it's everyone's responsibility to maintain safety at all times, and I feel probably more strongly than most people. I am a pilot. I've been a pilot for some 45 years. My son's a pilot and has flown for this airline and continues to. My daughter-in-law is a cabin attendant who has flown on this airline for the last—since its beginning, almost 5 years, until just a few months ago. My wife and my other sons ride it.

Chairman ROTH. Let me ask you this question. When you learned of this civil penalty and that Arrow was accused of not maintaining adequate records, what steps, what measures did you take?

Mr. BATCHELOR. I reviewed it with the people whose department it was. I think it was technical, for the most part, in the way the records were being kept.

Chairman ROTH. When was that meeting held, and with whom?

Mr. BATCHELOR. I believe this was in early—well, it was—there were several meetings, sir, I believe in early 1984 is when this was, when the inspection was, if I'm not—if I'm correct.

Is that correct, sir?

Chairman ROTH. Mr. Skully, do you want to respond?

Mr. SKULLY. Yes, sir; I think the inspection that we are speaking of was in March 1983. I would like to speak to the civil penalty that was settled in June 1985 for $34,000.

It consisted of five different violations, alleged violations from 1981 to January 1984. One of them was related to FAA being unsatisfied with the method that the records were being kept by Arrow Air.

As I recall, Batch Air and International Air Leases were assisting in the recordkeeping, and the FAA insisted that Arrow have their own records section. Arrow did establish their own records section as a result of that inspection. That was the civil penalty which was assessed.

Chairman ROTH. You are familiar with the Federal Aviation Administration's special two-phased national air transportation inspection, known as NATI, which began in March 1984?

Mr. SKULLY. Yes, sir.

Chairman ROTH. It is true, is it not, that as a result of deficiencies indicated during the phase I inspection that Arrow Air was selected for immediate phase II inspection?

Mr. SKULLY. That's correct, sir.

Chairman ROTH. The FAA inspection team report. It states that,

> Both Mr. Batchelor and Mr. Skully indicated to the team that the company would set a goal of carrying deferred maintenance items no more than 48 hours and that this could be accomplished since three of your companies would be merged with all its resources put to support Arrow Air.

This merger never took place, did it?

Mr. SKULLY. If I may elaborate, sir——

Chairman ROTH. Mr. Batchelor, let me ask you, did that merger ever take place?

Mr. BATCHELOR. Sir, there was never any intent, or statement, that we would do that. I think that's a mistake, and I think I know what you're talking about.

We had, and still have, a recordkeeping section in International Air Leases for the aircraft we lease; and we have a recordkeeping section in maintenance in Batch Air for the aircraft that Batch Air maintains, which are other than Arrow; and then Arrow Air had its recordkeeping section, and we were trying to consolidate and have one recordkeeping maintenance section/scheduling section for all three companies.

Chairman ROTH. This statement was made in the FAA report; isn't that correct?

Mr. BATCHELOR. If it was, it was an incorrect statement. It was never given to the FAA that we were going to merge the companies.

Chairman ROTH. Did you read this statement of the FAA?

Mr. BATCHELOR. I'm sure I have, but I don't recall it at this time.

Chairman ROTH. As chief executive, isn't it a matter of importance?

> As a company owner, Mr. Batchelor, as well as the vice president of operations and maintenance indicated a company goal of deferred maintenance items carried no more than 48 hours. The company indicated this could be accomplished, since three of Mr. Batchelor's companies would be merged with all its resources put to support Arrow, Inc.

I assume that this report was reviewed by you and your management team. Is that correct?

Mr. BATCHELOR. I have read the report, but I think Mr. Skully can answer the specific questions. He talked to the FAA directly; I did not.

Chairman ROTH. I will address the questions later to Mr. Skully, but did you review the report?

Mr. BATCHELOR. I have read the report. I don't recall its contents at this time.

Chairman ROTH. So you took no followthrough action, despite the fact that you maintain safety is a No. 1 priority?

Mr. **Batchelor**. I asked my staff to follow through on all reports that came in.

Chairman **Roth**. You are aware, aren't you, that the NATI phase II inspection team found that Arrow operates their fleet of aircraft with many deferred maintenance items and in some cases, these items are carried for many months without corrective action?

Mr. **Batchelor**. Yes, sir.

Chairman **Roth**. Do you consider that to be a reasonable record of safety? Would you be satisfied with that today?

Mr. **Batchelor**. Mr. Chairman, I don't believe there is any airline, airplane in this country today that's over 1 year old that doesn't have a deferred maintenance item at the end of a flight.

Now, some of the deferred maintenance items that the FAA brought up were such things as—one of the long-time one was an oven that warms food in the cabin, and the airplane it was on was an airplane that was on our route that didn't serve any snacks or any warm food, and it was carried as a deferred maintenance item. A light bulb can be out in a reading light, and that's a deferred maintenance item. These type things do not address safety, a lot of these, and so you can have a lot of deferred maintenance items.

Chairman **Roth**. Did you hear the testimony of the pilots a few minutes ago?

Mr. **Batchelor**. Yes, sir.

Chairman **Roth**. Do you agree or disagree that some of these deferred maintenance items were a matter of importance to safety as testified under oath by them?

Mr. **Batchelor**. I think, well, I heard the testimony, and if what they said were true, I would say they would be a matter of serious concern.

Chairman **Roth**. Do you know whether or not they are true or not true?

Mr. **Batchelor**. No, I do not know that.

Chairman **Roth**. Again, I would like to ask you this question: If you were faced with the same report, the same deficiencies, what action would you take today?

Mr. **Batchelor**. Well, I would have to report, sir, the answer to that. When Mr. Skully came on board, we had some maintenance deficiencies. That's one of the reasons we brought him on board. One of the first things we asked was to try to reorganize the maintenance, get better maintenance, get a better operation, eliminate the deferred maintenance items, and I attended meetings for a period of time where each morning, every deferred maintenance item on evey airplane was reviewed.

They were reduced. The count was so many, 80 today, 70 tomorrow and so on, and they reduced it down to a very low level.

There was a tremendous improvement after he came on board and reorganized it. Now, he handled it and knows how he did it. I think he could address it far better than I could.

Chairman **Roth**. I will address a series of questions to him later. Are you aware that the inspection team also found that Arrow had placed additional aircraft into service without revising most company manuals, including operating, maintenance, and training manuals?

Mr. **Batchelor**. That's untrue. I happen to know something about that one, sir. The manuals had been laying in the FAA's office for many months trying to get approval. After the team came in and did the inspection and wrote that up, they returned the manuals to us and got them approved in a hurry.

But we had those manuals submitted to the FAA for updating and approval. The office was overworked and understaffed in the FAA. The Miami Office has more air carriers than any other office, I believe, in the country.

Chairman **Roth**. It is my understanding that FAA has issued a new report just yesterday. One of the findings in the report indicates that Arrow still has many recordkeeping problems with respect to airworthiness directives, manuals and a number of other areas, and therefore, Arrow has not really resolved its problem with recordkeeping.

Mr. **Connaughton**. Mr. Chairman, may I make a comment at this point? We received the report only yesterday afternoon.

Chairman **Roth**. If I would ask you, you may. You are not a witness. You can consult with your client, but you are not here under oath.

Mr. **Skully**. Mr. Chairman, I do have a response, and even though we have only had the report less than 24 hours, that does respond to the elements that you mentioned.

Chairman **Roth**. Yes, go ahead.

Mr. **Skully**. This is a preliminary response of Arrow to the special inspection report issued by the FAA March 6.

Ever since the tragic crash at Gander, all of us at Arrow Air have been working diligently in an all-out effort to determine how such an incident could occur. As part of this process, and at the direction of the Federal Aviation Administration, an inspection of Arrow Air was commenced on January 21, 1986. The inspection was conducted over a period of nearly 4 weeks by a team of 22 persons, FAA personnel. At the conclusion of the inspection, an inspection team provided an oral briefing on February 26, 1986, to Arrow management.

At the oral briefing recorded at that time, FAA team members characterized Arrow's management as very adequate; they characterized their manuals as being a product of good work. They characterize our dispatch and release section as very impressive. They indicated several areas in which they found no problems.

Indeed, at the conclusion of the oral briefing, the manager of the FAA's flight standards for the southern region stated that the FAA inspection team did not find any deficiencies of sufficient nature to conclude that Arrow was an unsafe airline.

Arrow Air cooperated fully with the FAA during their inspection and will continue to do so. However, upon our review of the published report received only yesterday afternoon, we were distressed to observe an entirely different perspective than that which had been conveyed to us at the oral briefings. Furthermore, the written report was dated February 21, 5 days prior to the date of the oral briefing, at which time the FAA told us that no written, final report had been completed.

After 4 weeks of a thorough and exhaustive inspection and publication of the 44-page written report delivered to Arrow yesterday, the FAA report reaches no conclusion regarding the airworthiness of Arrow Air. Unfortunately, contrary to the collusion——

Chairman ROTH. Let me intervene. We have, I guess, your preliminary response to the special inspection report, and we will, without objection, include that in the record.[1]

Let me just ask these two questions, and then I will turn it over.

Mr. SKULLY. Sir, if I could point out just one short paragraph.

Chairman ROTH. Please proceed, but make it short.

Mr. SKULLY. Yes. The letter that was given to me on February 26 at the completion of their oral report dealt with the airworthiness directives dealing with eight engines. This is in the body of the report under 2.82. It says, "Arrow Air's records were erroneous in that they omitted the date of method and compliance in the seven engine records."

This is the most damaging finding in the report, quite frankly. Within 24 hours, we brought the records to our principal maintenance inspector, and he signed off concurring that we did, indeed, did have the necessary airworthiness information relative to its directives. That was the most significant finding in the report and we refuted it.

Chairman ROTH. There are several alleged violations by Arrow Air of the Federal Aviation regulations; isn't that correct?

Mr. SKULLY. I found probably 10, and this would represent probably 2 of them.

Chairman ROTH. Wasn't one of the others that Arrow was cited for flying crewmembers for too many hours in a given period and not allowing crewmembers adequate rest time?

Mr. SKULLY. They examined records over 1 year of 140 pilots, and they found 2, yes, sir.

Chairman ROTH. Senator Glenn.

Senator GLENN. Thank you, Mr. Chairman.

Mr. Batchelor, you said that the idea that air safety was secondary was absurd. That was your word, I believe, in your testimony a moment ago. You say that if you had heard of any pressures being put on pilots, you would not have tolerated it. Well, that is a good attitude.

You are saying that no pilot ever talked to you or no one in your company talked to you about air safety items or about pilots being scheduled overtime or delayed maintenance inspections going too long and things like that; that you are not aware of that?

Mr. BATCHELOR. No. I don't think I said that. But no.

Senator GLENN. No, you didn't say that. You said that air safety was never secondary and the thought that it might be was absurd.

Mr. BATCHELOR. That is correct.

Senator GLENN. That it was a secondary position.

Mr. BATCHELOR. That's correct.

Senator GLENN. Were you familiar with the NATI reports?

Mr. BATCHELOR. What is that?

Senator GLENN. The National Air Transportation Inspection reports?

Mr. BATCHELOR. I don't know what you mean.

---

[1] The special report was marked exhibit No. 5 and may be found on p. 301. The preliminary response was marked exhibit No. 6 and may be found on p. 344.

Mr. RINZEL. NATI reports.

Mr. BATCHELOR. Oh, NATI.

Senator GLENN. The NATI reports.

Mr. BATCHELOR. Oh, yes, sir.

Senator GLENN. You are familiar with those reports.

Mr. BATCHELOR. I can't say I am familiar. I have read it.

Senator GLENN. I have read it. Under phase II of that NATI report, "Arrow Air, out of 71 inspections, came up with severity code 3 discrepancies 53 times."

Let me say or define what that is out of that report. Severity code 3 indicates a significant noncompliance with regulations or good, safe operating practices occurred or existed.

"The severity 3 rate factor has direct evaluative merit in that it reflects the magnitude of noncompliance that has a direct, adverse effect or high potential for an adverse effect on safety."

You are cited 53 times for that out of 71 inspections. How you can say that that is absurd that you were not putting dollars ahead of safety? Why weren't these things fixed when they found and pointed them out to you?

Mr. BATCHELOR. I believe all those items were itemized and were fixed, sir, and that is why I brought Mr. Skully, in, to do the job. Again——

Senator GLENN. Mr. Skully, why didn't you correct these things? Did you have any direction from Mr. Batchelor to, "Cut this; we are really in bad shape."

Mr. SKULLY. At no time were those discussed.

Senator GLENN. Then why weren't these things fixed?

Mr. SKULLY. Senator, they were. If you will note, there were no violations filed as a result of the NATI report.

Senator GLENN. We are not talking violations. They are saying severity 3 has direct, adverse effect on safety. That is the definition of 3. You are trying to tell us here that these delayed maintenance items didn't affect safety at all.

Mr. SKULLY. Many do not, sir, but I also, in answer to the earlier question, was trying to comment that during the NATI report, the inspection, that was my second month on the job. I was able to use the report that the FAA provided me to improve a lot of the areas which were deficient. I established a reliability staff which had never been there before; a planning group that had been staffed properly; I brought in experienced people into maintenance control, which had not functioned before.

I had weekly meetings discussing DMI's per aircraft, per DMI, with the emphasis to reduce them so I knew which airplane had what DMI on it; also, what was the longest period that the DMI was being carried.

I gave your staff 2 years of reports on our reliability and how much it changed from 1984 to 1985.

Senator GLENN. What was your position on Air Florida prior to coming to Arrow Air?

Mr. SKULLY. Same title.

Senator GLENN. In charge of operations, senior VP for operations.

Mr. SKULLY. And maintenance, yes, sir.

Senator **Glenn**. Were you responsible for areas such as pilot training, such as deicing?

Mr. **Skully**. Not as such. I had a vice president of flight operations under me. But that would fall within my area of responsibility, yes, sir.

Senator **Glenn**. What is the deicing policy at Arrow?

Mr. **Skully**. It is left to the captain to always leave with a clean airplane.

Senator **Glenn**. I believe I was told, at least, that there is an Arrow policy memorandum that states that Arrow will allow up to one-eighth inch of ice on the wings, at least on the lower surface.

Mr. **Skully**. Frost on the underside, as every other carrier in the United States has, sir.

Senator **Glenn**. Is that any different than, say, United Airlines or Pan Am or any of them?

Mr. **Skully**. No. In fact, I have a copy of Pan Am.

Senator **Glenn**. Is that only on the lower surface?

Mr. **Skully**. Yes, sir.

Senator **Glenn**. Not on the upper surface?

Mr. **Skully**. Yes, sir. It is also provided in an advisory circular by the FAA, sir.

Senator **Glenn**. Captain Hood describes in his testimony two events in which you played a part, Mr. Skully. In one case, the situation involving the constantly sticking reversers arose. Why were those not fixed? They had been complained about time after time after time. Indeed, that was one of the things speculated on the most in the press—and I am not saying that is correct—speculated most in the press as to what may have happened, a malfunction in the reverse thrusters in the Gander crash. I am not saying that is correct. He also testified that there have been cases where those things malfunctioned in the air. Why were those things not fixed? What was the delay?

Mr. **Skully**. I really was not aware of that occurring. The 707's, we stopped operating them probably in June 1984, and I arrived in February.

One of my recommendations to Mr. Batchelor was to reduce the different types of aircraft within the fleet. We were operating, when I arrived, DC-10, DC-8, 727 and 707's. We, in the time period of that first 4 months, we did pull the 727's out of operation, and the 707's.

Senator **Glenn**. Mr. Batchelor, your basic business is buying, leasing, and selling aircraft, right?

Mr. **Batchelor**. Right.

Senator **Glenn**. You have them in the inventory. So during the period they are in the inventory, you can use them for air transport work, correct?

Mr. **Batchelor**. Well, no. We had airplanes parked at Miranda in Arizona, and——

Senator **Glenn**. What is the average length of time you have an aircraft in your inventory before it is sold?

Mr. **Batchelor**. There would be no way I could answer that question, sir, because we try to lease prior to—there is little of selling.

Senator GLENN. I have been told that you have an aircraft in your inventory, on average, of 2 years, I was told by staff who looked into it. I presume that information came from you, came from your people, anyway, and the answer to: What was the average time a plane was in Arrow's fleet before being sold, the answer was 2 years.

Mr. BATCHELOR. I don't think that is correct, and that's not a question the staff asked us, sir.

Senator GLENN. Staff, where did you get that? Mr. Skully said it. Mr. Skully told us that, I am told.

Mr. SKULLY. It is an estimate, yes sir.

Senator GLENN. All right. You are just keeping planes.

Mr. BATCHELOR. Mr. Skully, sir, would not know what the period of time that international and subsidiaries owned aircraft. He is with Arrow, and——

Senator GLENN. I presume Mr. Skully has access to the log books if he is the director of operations. He would know when you got the airplane and when it was sold. I think of all people in your company, he would know when the airplane was with you, the length of inventory.

Mr. BATCHELOR. No, sir; he wouldn't.

Senator GLENN. Is he denied access to the log books on those aircraft?

Mr. BATCHELOR. Sir, for example, just for example, we have a number of airplanes leased to Western Airlines which I or he or no one else in our organization has ever seen any of the log books on.

Senator GLENN. I presume what he was talking about was the inventory of airplanes you fly on your own charter service, your own Arrow Air service. That is what we are talking about.

Mr. BATCHELOR. OK. I misunderstood your question.

Senator GLENN. OK. Would you agree, then, that you keep them only 2 years?

Mr. BATCHELOR. You say aircraft in inventory. That was your question, Senator, if I understood you correctly.

Senator GLENN. What is the average length of time that an Arrow Air aircraft remains with Arrow Air before it is either sent off for lease or is sold?

Mr. BATCHELOR. So long as it can be economically operated.

Senator GLENN. Which is an average of 2 years.

Mr. BATCHELOR. What Mr. Skully determined, that would be correct. I don't know.

Senator GLENN. Fine. It would seem to me that in 2 years' time, you are looking for markets to sell these airplanes all the time, I presume; is that correct?

Mr. BATCHELOR. No, sir.

Senator GLENN. Why aren't they in your inventory more than 2 years? You are obviously looking for it. What I am getting at is, it seems to me the motivation for keeping these things really up to snuff, really up to the latest state of the art and correcting all the deficiencies and not putting things off is because you are looking to sell the airplanes. If they are only in your inventory for 2 years, you are obviously marketing the airplanes, and you use Arrow Air as a good way to use the airplanes, keep them flying during that time period before you sell them. You have to presume that.

Mr. Batchelor. The presumption is incorrect, sir.

Senator Glenn. Well, then, you tell me how you plan to operate Arrow Air? Tell me, then, why you only keep them in the inventory for 2 years.

Mr. Batchelor. Well, the policy is to make—well, the policy was to have Arrow as a profitable, operating, continuous airline, not to put airplanes in or out.

The majority, by probably 75 or 80 percent of the aircraft that Arrow's companies own or control——

Senator Glenn. I am sorry, I can't hear you.

Mr. Batchelor. Probably over 60, probably as high as 80; 75 would be a good, educated guess of the number of airplanes that International and associated companies own and lease are never operated by Arrow. Arrow went on a policy of trying to develop certain types of business of certain types of aircraft. If that policy and business plan didn't work, then we sat down and tried to come up with another plan.

Chairman Roth. We have a vote on. I think we better vote.

Senator Glenn. We have a vote on. I will have to continue this when we get back. Just one other question before we leave. Mr. Skully, in keeping up with FAA, does FAA permit your logbooks to be in a foreign language?

Mr. Skully. I don't understand the question.

Senator Glenn. The question is, do they permit your paperwork on engines and parts to be in a foreign language?

Mr. Skully. I don't know, sir.

Senator Glenn. A non-English language.

Mr. Skully. Like Portuguese, sir?

Senator Glenn. Like Spanish. One aircraft, I am told, had an Iberian engine, and all the paperwork on the engine was in Spanish.

Mr. Skully. I thought you were speaking of the Vasp plane, which is a Brazilian plane.

Senator Glenn. Tell me about that one. [Laughter.]

Mr. Skully. I would be happy to.

Chairman Roth. We will be back; we have to vote.

[Members of the subcommittee present at the time of recess: Roth, Glenn, and Gore.]

[Members present after the taking of a brief recess: Roth and Gore.]

Chairman Roth. The committee will please come to order. Senator Gore.

Senator Gore. Thank you very much, Mr. Chairman. Mr. Batchelor, and Mr. Skully, I know that you have probably both had a difficult time since the crash in December. I know that this hearing is, no doubt, difficult for you.

Nevertheless, questions must be asked. I have had the occasion to attend the memorial service at Fort Campbell. Many Americans have watched it on television, as President and Mrs. Reagan patiently and compassionately comforted each member of the bereaved families gathered there.

While it is true that no cause has as yet been established for the crash, there has been, during the investigation, a great deal of information released about the safety record of your airlines. The common description is either "worst" or "one of the worst" in terms of safety.

[At this point, Senator Glenn entered the hearing room.]

Senator **Gore**. You, in your prepared statements, have attempted to dispute that. However, the records from the FAA seem, in my reading, to support it.

We don't have the figures for 1985 because they haven't been compiled yet. But for 1984, the last year for which the figures are available, out of 327 airlines, Arrow Air ranked 326th or, to put it another way, it was the second most complained about airline in the United States. The other one has gone out of business. You had a complaint rate of 32.5 per 100,000 passenger miles flown.

Doesn't that kind of ranking tend to substantiate the testimony we have heard here today, that your record is one of the worst in the business?

Mr. **Batchelor**. I just—I don't know how they do those figures, Senator. But I do know that the Military Air Transport Command, for the last 2- or 3-month period, of all the carriers flying, for them ranked Arrow as No. 2 from the top, as being the best in performance and overall rating by a letter that they sent us. That's for either the months of November-December or December-January 1985-86.

The ranking based on passenger miles or passengers carried, I think, is deceptive.

Senator **Gore**. Why is it deceptive? First of all, let me preface that question by saying that the Military Airlift Command only deals with a handful of companies. This reflects all 327 airlines in the United States, and the latest records available indicate that out of all 327, you are the second worst, and the other one, the worst, has gone out of business.

Mr. **Batchelor**. I believe you said that is for 1984, Senator.

Senator **Gore**. The latest figures that are available, that is correct.

Mr. **Batchelor**. I think you will find, if you check for 1985——

Senator **Gore**. I have; they are not available yet.

Mr. **Batchelor**. I think when they become available you will find a marked improvement.

Senator **Gore**. That is merely speculation. What is your explanation for the latest figures that are available? Why are you the second worst out of 327?

Mr. **Batchelor**. I can't answer that, sir.

Senator **Gore**. OK. You have already been asked about the National Aviation Transportation Inspection. They looked at all 327 airlines, and then they came up with a list of the 43 worst offenders out of the 327. You were in that group, right?

Mr. **Batchelor**. I don't, I don't know the ratings.

Senator **Gore**. You know that, don't you, Mr. Skully?

Mr. **Skully**. Sir, I have never seen the report.

Senator **Gore**. We will put the report in the record at the appropriate time, Mr. Chairman, if my colleagues are agreeable. It will substantiate what I have just said.[1]

---

[1] The report referred to was marked exhibit No. 7 and may be found on p. 352.

They then took the 43 worst out of the 327, did another cut, and came up with the 16 worst. You were in that group. That puts you in the bottom 5 percent, according to that particular aviation inspection.

Others have commented on the adverse reports that you compiled during the inspections. You don't fly that much compared to the major airline in the United States. The largest airlines in the United States is American Airlines.

You had almost as many adverse reports as American Airlines, even though you're just a tiny company with a few planes. How do you explain that?

Mr. BATCHELOR. I wouldn't—I can't explain it. I would comment, though, if I may, that we had just had—we have had probably 30 to 40 inspections since the tragic day in December when this accident occurred. As of last week, we had just completed an inspection involving 22 FAA inspectors that were there for approximately 4 weeks. At the verbal debriefing a week ago today, they complimented our management, and I specifically asked the question of the group that was there if they had any reason that Arrow Air should be grounded or not flying, and they said no, there was nothing. I would like to——

Senator GORE. Frankly, I don't find it surprising that since this horrible tragedy you have been paying more attention to the maintenance problems and the other problems that have been cited over the year. I would hope that would be the case. I am glad to hear you say that it is.

You heard the pilots testify earlier, particularly Mr. Hood and Mr. Sanjenis, who were both pilots for your airline, that it was common for you to require pilots to fly 18 hours a day, 18 hours out of 24 or longer. Is that true?

Mr. BATCHELOR. That's not true.

Senator GORE. Why were you cited 14 times for precisely that violation in 1982?

Mr. BATCHELOR. We are not, sir. That is not true. And——

Senator GORE. Let me provide them to you for the period that I referred to. I have a copy of the FAA investigative reports for only 3 months in 1982. Excuse me. This is the total for 1982, and I would put this in the record, if that is all right, Mr. Chairman.[1]

Chairman ROTH. Without objection, so ordered.

Senator GORE. My staff has gone over the FAA investigative reports for that year, and we have come up with 14 citations for violating FAA rules concerning the number of hours that a pilot can fly. Are you unaware of that?

Mr. BATCHELOR. I think I stated earlier, sir, that there were problems in Arrow's management in 1982, 1983. In late 1983, we started making changes, and we brought Mr. Skully and a new management team on board in early 1984.

They made a number of dramatic changes.

Senator GORE. 1984 was the year when you were the second most complained about airline out of 327. So apparently, there wasn't that big a change; at least that is the way I read those statistics.

---

[1] The information referred to was marked exhibit No. 8 and retained in the subcommittee files.

This incident in Newfoundland was not the first flight during which you had a fatality; is that correct?

Mr. **Batchelor**. I don't know what you mean, sir.

Senator **Gore**. It was the flight that I referred to in my opening statement. On November 11, 1982, one of your pilot trainees was killed. The plane began losing cabin pressure. While leveled off at 33,000 feet, the cabin had an atmosphere of about 20,000 feet. Roger Winn was the pilot trainee's name, and he was rushed to the hospital and died a few hours later.

The NTSB investigated and stated that the cause of the incident was a stuck outflow valve which caused the cabin to depressurize.

Were you not aware of that?

Mr. **Batchelor**. I heard about it at the time.

Senator **Gore**. You heard about it at the time?

Mr. **Batchelor**. I heard about it at the time.

Senator **Gore**. Well, I am glad.

Mr. **Batchelor**. May I finish, sir?

Senator **Gore**. Please, go ahead. I am sorry to interrupt you.

Mr. **Batchelor**. I understand that the persons you asked had—this came out later—had a history of having seizures and problems from skindiving or any time he depressurized from skindiving, and this was a condition that we didn't know about it. And evidently, it occurred on this flight.

It was a tragic thing there, but I think Mr. Skully can answer more of the details than I can.

Senator **Gore**. Mr. Skully wasn't there at the time. Let me ask you this: Are you aware that the FAA complained to your company about a failure to cooperate in the investigation of that death?

Mr. **Batchelor**. No, sir.

Senator **Gore**. That of the NTSB?

Mr. **Batchelor**. No, sir, I am not, and I can't believe it. I just can't believe it.

Senator **Gore**. I will show you the letter from the FAA.

Mr. **Batchelor**. It has been our policy to always cooperate fully in any investigation.

Senator **Gore**. That is not what they say. They say that it took them 5 months to get a response from the company about this death, and after this 5-month delay, you provided them "only sketchy information."

They also contacted you with a letter discussing your "lack of cooperation during the Safety Board's investigation of this occurrence."

Is that the first time you have heard of that?

Mr. **Batchelor**. Yes, sir, it is.

Senator **Gore**. Are you in charge of this airlines or not?

Mr. **Batchelor**. I think I stated I am chairman of the board.

Senator **Gore**. How did you hear about the death? Did you read about it?

Mr. **Batchelor**. No, it came up in a report.

Senator **Gore**. It came up in a report.

Mr. **Batchelor**. From the people in the cabin.

Senator **Gore**. But you didn't know that the Safety Board was complaining that your company failed to cooperate in the investigation?

Mr. BATCHELOR. No, sir, I did not.

Senator GORE. You also didn't know that you were the second-most complained about airlines in 1984, and you didn't know that you had 14 citations during 1982 for violating the FAA rules concerning the number of hours a pilot could fly.

Did you just look at the balance sheet? I mean, the question is a pointed one, because I don't understand how someone nominally responsible for the airline could be unaware of such serious questions about safety as have been repeatedly raised with respect to Arrow Air.

Mr. BATCHELOR. I tried to hire the best people I could find in the industry to run the safest operation that can be run. That is one of the reasons we brought Mr. Skully on board.

I think, as I stated earlier, I was not involved in the day-to-day management of Arrow. The prior management in Arrow was well experienced, the senior vice president of another major airline—before they came to Arrow; and when they left Arrow, they went to another major scheduled airline and are now in the same position, senior vice president, operations and maintenance.

Senator GORE. Mr. Chairman, I would ask unanimous consent to put the National Transportation Safety Board material to which I referred in the record. I appreciate your indulging me even though the red light is on. Thank you, Mr. Chairman.[1]

Chairman ROTH. Without objection, so ordered.

Mr. Skully, in your prepared testimony, you mentioned the so-called tail-strike incident, that the pilot did not inspect the damage to the plane before taking off. You say you spoke with that pilot. What was his explanation for this apparent disregard for safety on the condition of a plane?

Mr. SKULLY. I didn't speak to the pilot, sir, but the seriousness of the pilot failing to want to inspect the aircraft after the tail strike and then the failure not to report it to management was the reason that we disciplined the captain. The FAA has since taken certificate action against all three crewmembers.

Chairman ROTH. What disciplinary action did you take?

Mr. SKULLY. We suspended the captain, sir.

Chairman ROTH. What measures did you take to ensure that your personnel understands that it is company policy for them to report any maintenance problems?

Mr. SKULLY. It is an Arrow policy to report anything unusual. I think, in this particular case, they spent a lot of time relating and looking at it. The normal procedure on a DC-8 is that on the walk-around inspection, either the flight engineer or one of the crewmembers look to determine if there has been any paint removed from the tail skid, then it requires an inspection.

This was an unusual thing. Normally, a tail strike occurs at lift-off or on landing. The way the aircraft was loaded, the tail strike occurred around 500 or 700 feet of the initial run.

Chairman ROTH. I understand this involved the same plane that was involved in the crash at Gander; is that correct?

Mr. SKULLY. Yes, sir; it is the same tail number.

---

[1] The information referred to was marked exhibit No. 9 and may be found on p. 354.

Chairman ROTH. You say it is your policy. What do you mean by it is your policy? How is that policy implemented?

Mr. SKULLY. In our general operations manual, that anything that is unusual, that is questionable, out of the ordinary, the crewmembers are supposed to report to the company.

Chairman ROTH. And this written manual is given to whom?

Mr. SKULLY. All the crewmembers have it, sir.

Chairman ROTH. How do you ensure that that particular policy is adhered to by the pilots and other personnel?

Mr. SKULLY. We pretty much have to depend upon the crew members to abide by it. If they don't——

Chairman ROTH. Have you ever called the employees together, in part or otherwise, to ensure that this is understood clearly?

How do we get this testimony, where pilots have testified that they felt pressure to adhere to scheduling deadlines at the expense of safety considerations? It doesn't seem like your policy that safety was first was getting through.

Mr. SKULLY. Sir, I think it has been getting through, and I think there has been a change.

Chairman ROTH. I would like you to tell me at what times and what kind of meetings you implement this policy.

Mr. SKULLY. We have had infrequent pilot meetings. If we are going through a major schedule change or a plan of going into new areas of operation.

Chairman ROTH. Have you ever made it clear that safety was to come before meeting the schedule?

Mr. SKULLY. Yes, sir, and we have had to discipline and terminate people who haven't followed the policy, sir.

Chairman ROTH. Could you tell us when those meetings took place, on what kind of a schedule?

Mr. SKULLY. I don't have that with me, sir, but if I may, I will try to obtain it.

Senator GORE. Mr. Chairman, would you yield briefly on this point?

Basically, Mr. Skully has said in response to your question that they give the employees this operating manual and require them to abide by that. I would like to point out for the record that the special inspection report dated February 21 of this year referred to earlier, cites Arrow Air for the fact that its operating manual does not contain weight and balance data for the DC-8 aircraft currently operated by Arrow. It goes on to cite the sections that require that an operating manual contain such information.

I think it is relevant, because one of the leading theories in the crash investigation going on now, relates to failure in accurately measuring the weight in the takeoff.

I appreciate your yielding to insert that at this point on the operating manual.[1]

Chairman ROTH. Thank you, Senator Gore. I was going to get to that problem next.

Senator GORE. I appologize.

Chairman ROTH. That is all right. It is perfectly relevant here.

---

[1] See p. 301.

Are weight and balance issues of critical safety importance to the operation of an aircraft?

Mr. SKULLY. Yes, sir.

Chairman ROTH. How do you explain this oversight in connection with the tail strike incident? Apparently it was the pilot's lack of consideration for a proper distribution in the weight of the cabin of the plane. Is this the pilot's responsibility?

Mr. SKULLY. Yes, sir, he's the ultimate responsible person.

Chairman ROTH. Whose responsibility is the method of calculation?

Mr. SKULLY. In this particular case, we had a—I don't know whether you would call him—I guess you would call him an agent, and the flight was going through—I believe it was Grand Rapids to Toledo. Why he did it, I'll never know. It didn't make much sense to me, but for ease of loading the next group, he put about 98 passengers in the rear of the DC-863, which made it extremely challenging, tail heavy.

Chairman ROTH. But Senator Gore pointed out that the operating manual did not have the necessary, accurate information.

Mr. SKULLY. The 63 did, sir. The 62 that has been cited is carried on a bulletin until we get it into the manual, and that is a normal procedure that is used, and FAA signs it.

Senator GORE. Mr. Chairman, the FAA has cited them for not containing it. Mr. Skully, are you saying that it was contained and the FAA says it wasn't?

Mr. SKULLY. No, sir, I'm saying that we had gone through a transition, changing the methodology. The 63—we are operating two different types of DC-8's. The one with the tail strike is a 63. That was in the manual. The one that the FAA is referring to is a 62, and during the interim period, we carried as a pilot bulletin, which basically contains the same information until it's printed and goes in the manual.

Senator GORE. Which the FAA says isn't good enough.

Chairman ROTH. But basically, if I understand what you are saying, the pilot was to refer to inaccurate information.

Mr. SKULLY. He would in this case, yes, sir.

Chairman ROTH. Let me ask one final question, and then I will call on Senator Glenn.

What measures would you take now to improve the safety records of your company based on your past experiences? In what ways do you see it as deficient?

Mr. SKULLY. I feel that we have been looking at ourselves very closely since you have been there, for 2 years; we seek the advice and guidance of the FAA. I have employed the use of outside consultants to come in and offer advice and guidance, and very knowledgeable people, and accept their recommendations.

I spent a lot of money for Mr. Batchelor on improved equipment. I think the 1984 complaints that Senator Gore refers to reflects a tightening down and cancelling flights, and this is why the complaints are up. We wouldn't push pilots, nor would we push airplanes that were questionable. Consequently, you get a flood of complaints from the passengers, and that's why the complaint rate is very high.

I agree with Mr. Batchelor; when you find the 1985 report, I think you will find a marked improvement.

Chairman ROTH. Senator Glenn.

Senator GLENN. Thank you, Mr. Chairman. On the line of questioning I was taking just before we had to go vote, what is your policy with regard to use of foreign parts?

Mr. BATCHELOR. We don't use foreign parts.

That is absolutely false, sir. I would be glad to expand on that, if you would like for me to.

Senator GLENN. Yes; I would like for you to. Because I think what the committee has been told is just the opposite; that you have used foreign parts. What was the situation with regard to Vasp Air?

Mr. BATCHELOR. With what?

Senator GLENN. Vasp Air. Mr. Skully was referring to that, I believe.

Mr. BATCHELOR. Oh, Vasp. The situation with Vasp Air is that it was an airplane leased by Arrow direct from Vasp Airlines in Brazil, and the FAA approved the lease; they licensed the airplane; they licensed the parts. I know of no complaint about any of the parts on that.

The complaint the FAA made was not on foreign parts, and that's where the confusion arises. There were U.S.-manufactured parts, manufactured on a type certificate issued by the FAA; sold overseas to Iberia Airlines. We brought a group of airplanes from Iberia Airlines, and we bought a group of spares that had been overhauled. Iberia is an FAA-approved repair station.

We brought those parts back on the airplane. They were put in use; the parts were being used with the consent and knowledge of our FAA, and it was an item that came up 2 years ago, or 2 years ago in this NATI report. It was approved at that time.

When the 22 inspectors descended on us about a month ago, they came up with this item again and said, "We now do not approve it."

I would love to read to this committee a couple of the FAA bulletins on the use of U.S.-manufactured parts, overhauled by an FAA-approved overhaul station overseas for which they grounded our DC–8's.

Senator GLENN. Let me give you a specific to respond to here, then. I will read a paragraph out of a staff report. This is an FAA briefing for the staff titled "FAA Briefing On On-Going Arrow Air Inspection." It was February 13. I would like your comment on this particular paragraph:

> The records system for tracing the servicibility of component parts is very bad. The inspectors found records indicating parts is very bad. The inspectors found records indicating parts of foreign origin without foreign repair station tags.
>
> (Subsequently, Arrow grounded 10 aircraft in order to replace foreign component parts for which Arrow had inadequate documentation.)
>
> When the team inspected the Arrow station inspection facility in San Juan, on-half of the parts on the shelf were foreign parts which apparently came from Batch Air. The inspectors found no evidence of bogus parts from Inaloc (sic) or elsewhere.

Mr. BATCHELOR. I would like to read sir, if I may. This is a bulletin put out by FAA.

Senator **Glenn**. Is there any response or any question or comments in that paragraph?

Mr. **Batchelor**. Yes sir, yes, sir.

Senator **Glenn**. OK, go ahead.

Mr. **Batchelor**. This is something I studied extensively lately since it came up. This is dated December 3, 1985. I'm only going to read two sentences out of this. It's a long thing. I will be glad to submit it.[1]

> There is some confusion as to what constitutes acceptable overhaul records for the purpose of meeting the requirements of FAR 121.

What this is, is this addresses foreign parts.

> There in no clear guidelines as to what is an acceptable record. Knowledge of the previous operator, country or previous certification, type operator, repair facility must be taken into consideration.

I can give you a number of examples, but I have been purchasing U.S.-built aircraft overseas from major airlines where they had an FAA-approved repair station, returning those aircrafts from those countries to this country.

Senator **Glenn**. Would you say FAA is negligent, then, in not putting out proper guidance in this area; is that correct?

Mr. **Batchelor**. Yes, sir, I would say there is tremendous confusion, and I can name a dozen other airlines that are doing exactly what we are doing that have not been reprimanded and give you specific instances of this.

Senator **Glenn**. You say you don't use foreign parts at all, so this shouldn't apply to you, except the FAA in this paragraph that I read to you, they state that you have foreign parts.

Mr. **Batchelor**. Every one of them are U.S.-manufactured parts, they are overhauled by a U.S.-approved repair station. But there is ambiguous interpretation and confusion in the FAA's guidelines.

Senator **Glenn**. It seems like it went through your inspection facility in San Juan; that half the parts on the shelf are foreign parts that came from Batch Air.

Mr. **Batchelor**. They are not foreign parts, sir. That is an incorrect statement.

Mr. **Skully**. They are foreign station tags.

Senator **Glenn**. Were they overhauled, then, at foreign stations and were not properly tagged and documented as to where the work was done and how it was done and so on? Is that the problem?

Mr. **Batchelor**. Well, that is partially correct, sir.

Senator **Glenn**. Mr. Skully, is that correct?

Mr. **Skully**. I would say that would be a good explanation of it. I would like to, if I may, say a word on—because it relates to your question.

We have been using these parts for over 2 years with full knowledge of the local FAA office, and they have no problem with it. This is an inspection team from another region that has a difference of opinion with the inspectors. This is one of the problems the FAA is having.

---

[1] The information referred to was marked exhibit No. 10 and may be found on p. 356.

Senator GLENN. You refer to regions. That is another problem we want to get into with the FAA, because I have heard from several different people and pilots operating in this area, that of all the regions in FAA, if you want to get by with a pretty easy inspection and you want to get by with a pretty easy certification, you go to the Southeast.

That has come from several different sources, and we will be asking the FAA about that. You don't go to the Northeast. They are tough as nails in the Northeast, apparently. If you want to get something, and get it in easily, you go to Florida.

It may be that a lot of the charter services are chartered out of Florida for a good reason; I don't know. Maybe it is because of good weather there, but it may be also because of this word about how they get easier treatment there than they do in any other region. That is something we want to go into with FAA later.

I suppose FAA has people in the room. Be prepared. A week from now, we are going to ask those questions.

Did you have anything further to say on parts?

Mr. SKULLY. Yes, sir. I was going to explain how ridiculous the whole issue is. This Vasp airplane, which is a foreign-registered airplane, in order to operate it, we leased it in June a year ago. We brought with it for a price, probably 300,000 dollars' worth of spare parts with Vasp tags on them. Vasp is not even an FAA-approved repair station. This is OK. We can change any component on an airplane and fly it in passenger service, and I don't understand it. I really don't; 31 years in FAA didn't give me the wisdom to follow this whole issue.

Senator GLENN. Just one more question, so I can follow up on this, if I might. I know my red light is on, but just to follow through to its conclusion here, is it your opinion that you can have these parts as long as it is at a foreign repair station; you can bring those back to any FAA-approved station; you can bring those back and use them on your whole flight if you want to?

Mr. SKULLY. There are provisions to allow an airline to use these parts. This is another paper exercise that, somehow, we neglected to do, sir.

Senator GLENN. Let me read out of a letter which is a fairly recent letter, but it is still directed to Mr. Strehse of Arrow Air.

Mr. SKULLY. Strehse.

Senator GLENN. Strehse, OK. This is from FAA to him. What is his position?

Mr. SKULLY. Vice president of maintenance.

Senator GLENN. Vice president of maintenance. The fifth paragraph down says:

> Based on these regulations, a foreign repair station cannot work on a product or return that product to service on a U.S.-registered aircraft unless that work was incidental to its operations while operating in a foreign country.

In other words, this was never intended to be a new supply of foreign parts coming in, and certainly not without proper documentation.

My time is up. I will wait until my next turn.

Chairman ROTH. Senator Gore.

Senator **Gore**. Thank you, Mr. Chairman. Mr. Skully, you earlier responded to my questions by saying that everything began to turn around in 1984, when you were hired. However, the testimony we have heard from the first panel here covered that period, as well, because Mr. Hood did not leave until January 1985, and Mr. Sanjenis left in 1984.

Of course, many of the problems that I referred to earlier have also occurred since 1984. I understand the thrust of your comment about the passenger complaints possibly being provoked by the tightening down.

I want to emphasize that their testimony covered this period on an inclusive basis. Have either you or Mr. Batchelor heard of the reports that we got of incidents where all three pilots were asleep simultaneously in the cockpit and the——

Mr. **Batchelor**. If I heard——

Senator **Gore** [continuing]. And the flight attendant having to wake them up?

Mr. **Batchelor** [continuing]. If I heard of that, I would go to the FAA and ask all the guys to lose their licenses. I think that is ludicrous. I have never heard of such a thing in 50 years. I have been a pilot for almost 50 years. I have never ever heard of three crewmembers asleep in a cockpit. Anybody who has seen that and hasn't reported that and taken action on it, their license should be taken away from them.

Senator **Gore**. They testified, though, that you required them to work 18 to 22 hours out of a 24-hour period. What do you expect them to do?

Mr. **Batchelor**. Sir, that is not true.

Senator **Gore**. That is what they testified under oath.

Mr. **Batchelor**. I heard what they testified under oath, and I am under oath, too.

Senator **Gore**. They testified that there are a lot of things you didn't know about.

Mr. **Batchelor**. That is very true. That is very true.

Senator **Gore**. You would have us believe that not only is the airplane flying on automatic pilot with the crew asleep in the cockpit, but that the management is asleep in the board room; the whole company is on automatic pilot.

Mr. **Batchelor**. I wouldn't attempt to have you believe that, sir.

Senator **Gore**. If their testimony is true and they are forced to work 18 to 22 hours a day out of a 24-hour period, then wouldn't you think that it is just natural for a human being to fall asleep under those circumstances?

Mr. **Batchelor**. If that were the case, they shouldn't fly the airplane.

Senator **Gore**. They are told to.

Mr. **Batchelor**. They should not take off.

Senator **Gore**. They are told they are put under pressure by your company to take off.

Mr. **Batchelor**. I don't believe it happened where—I don't believe that happened.

Senator **Gore**. Mr. Hood has provided us his logbooks to back up his sworn testimony. Do you have anything to back up your belief that his logbooks are wrong?

Mr. BATCHELOR. No, sir. I haven't seen his logbooks, but I can't believe that anybody would ever allow three crewmembers to go to sleep in the cockpit, and I don't believe Arrow ever scheduled crews to where three crewmembers would be put in that position.

Senator GORE. The other two pilots testified that they had knowledge of such occurrences, also.

Mr. BATCHELOR. Not on Arrow, because one pilot had never worked for Arrow.

Senator GORE. That is correct. Mr. Sanjenis said that he had heard of reports of that also, though, and he was with Arrow. We heard testimony, also, on the specific claim that one of the flight attendants called 4 days before the crash and said, "We've got a problem with one of the engines, but they have decided to defer the maintenance until after we get back to the United States."

Had you previously heard of that?

Mr. BATCHELOR. There was, on this airplane, there was maintenance required on one of the engines. That maintenance happened to be, I believe, a starter change, and the airplane went into—is that correct?

Senator GORE. Excuse me. I didn't hear your response. What was the maintenance required on the engine?

Mr. SKULLY. It's an engine change due to time, sir, and it was to be scheduled to change in Oakland by World Airways.

Senator GORE. Had it been deferred?

Mr. SKULLY. No, sir. It had, appropriately, 60 hours to go.

Senator GORE. What problems were they having with it?

Mr. SKULLY. None that I'm aware of.

Senator GORE. Why would the flight attendant say that they were having problems with one of the engines?

Mr. SKULLY. Based on what I heard Captain Hood state, they seemed concerned that they didn't go to St. Louis and now the aircraft is going to go to Oakland. The reason it was sent to Oakland was for a routine engine change. We positioned an engine at Oakland for the scheduled engine change by World Airways.

This is not unusual but not routine, I would say World changes an engine for us once or twice a year.

Senator GORE. The testimony leads me to believe that deferred maintenance is a routine occurrence or has been at Arrow Air. But again, she said there were problems with it; not that they were expecting an engine change, but that there were problems with it.

Mr. Chairman, I thank you for your patience.

Chairman ROTH. Thank you.

I would like to bring the hearing to a conclusion.

Senator GLENN. I have a couple of points I want to make here. We talked about icing on the wing awhile ago and what was required on that. The maintenance manuals or the operations manuals, rather, permit one-eighth. One of the things in this special inspection report on Arrow Air that was issued February 21 by FAA out of the southern region, one of the things you were cited for, and I quote, "cold weather operations, ice removal procedure" on page 584 of the GMM, which is the General Maintenance Manual is contrary to section 121.629(b) of the FAR.

The GMM says that one-eighth of an inch of frost is allowed on the lower surface of the wing.

Now, the FAR on that, that part 121.629(b) states, and I quote, "No person may take off an airplane when frost, snow or ice is adhering to the wings, control surface, or propellers of the aircraft."

It gives no exemptions to that. So I put all the other airlines on notice. You said that United, Pan Am, American, and all the rest of them use that as a standard. They are on notice right now that they are in violation of FAR, and I will ask them some questions about that.

Mr. SKULLY. Sir, there is an FAA advisory circular—whoever wrote that wasn't aware of that—within FAA that permits this.

Senator GLENN. That defines this section further that permits one-eighth?

Mrs. SKULLY. Yes; that expands and says that this is permissible.

Senator GLENN. OK. I would like for staff to get hold of that, then, or maybe you can provide that for us so we can have that.[1]

Mr. SKULLY. I think I have it with me.

Senator GLENN. Another thing that followed the Gander crash that I was very surprised about was the weight and balance stuff that was touched on awhile ago, but not the same point that I want to make with it. Apparently, weight and balance had been as much as 6 tons in error in the Gander crash because of the use of the standard 170 per passenger as opposed to weights that were more nearly 220 or so per passenger for the troops and equipment they were bringing back; plus full baggage holds that may have put it off a little bit further.

What are your comments on that?

Mr. SKULLY. If I may, sir, the investigation is underway. I have not been able to gain much information from the Canadian Safety Board. I don't want to suggest it is clandestine, but it has been the toughest thing to get information from. We are having a prehearing the 24th and 25th in Gander. The final hearing is scheduled April 8 in Ottawa.

Senator GLENN. I agree on that. It has been difficult to get information, and I am not saying that the Canadians are wrong in what they are doing. They want to conduct their very thorough investigation.

I support them in that, but I also want our people to get all the information that we need to correct this situation if it is occurring on other airlines, too. So that is the reason that I asked the question. I think obviously, the 170, just with what we know about, with the number of people on board, if the 170 weight was being used as a standard, that was not going to be adequate for troops carrying duffle bags and equipment, things back from wherever the mission was or returning to the States.

I think I could categorically state that if you used the 170 weight, it was the wrong weight for those people; multiplied by the number of people on board, that you could come up with a pretty good estimate of how far off you were in weight and balance.

I don't know whether the positions of the people on the airplane were such that it would put you outside the weight and balance limits or not. From my own test pilot days, I know how critical that weight and balance can be. If you have it out at the margins there, it could have given you real control problems on takeoff, if, in addition, there were any icing conditions and any other operations were any less efficient than they might have been.

---

[1] The circular referred to was marked exhibit No. 11 and retained in the subcommittee files.

Let me, Mr. Chairman, just summarize this a little bit as to where, at least, I stand on this. I know that we are asking you gentlemen some things this moring that you maybe don't have full access to yet in the way of information from the Canadians, and so on.

But what we are concerned about, also, is FAA; whether you, and the FAA, in your previous incarnation, Mr. Skully, would have permitted some of the things that have been going on at Arrow Air and whether some of the economic pressures are such that once you get in industry, that there is really a tendency here to push too hard; cut the corners too close to where air safety is sometimes given a back seat; when a company is really hard pressed.

That is particularly important with deregulation. Under deregulation, we have little hippity-hop airlines hopping up all over the place, dozens of them. Every time I go back to Ohio, I see a new little airline someplace I didn't know was there before. I see them in other parts of the country. This makes a very, very difficult job for FAA, and whenever there is an accident, for the National Transportation Safety Board people, also.

If we need to expand their activities, we want to know that, we need to double them or triple them. I would like to see inspectors all over you folks and other carriers like flies out there. I hope we can get dozens of them our there, not just a few.

But I would also hope that that wouldn't be necessary. I would hope that the people, the operators are not cutting corners and not putting a lot of stuff on deferred maintenance, things that, can truly affect safety of flight.

You can't expect crews to work more than normal hours out there. They do get tired. We are just trying to make this the safest possible method of transportation that we possibly can do instead of cutting personnel, which we are going to consider in this Congress this year.

We are going to be out there on the floor, I can tell you right now, arguing, trying to go against these automatic cuts for FAA and National Transportation Safety Board and everyone else, and we are going to be fighting tooth and toenail out there trying to get the help that you need, But I would hope that the carriers, of which you are a representative here today, nonscheds, I would hope that they can take whatever information that goes out across this country and say that we are not going to tolerate any cuts in safety. That is going to be with Arrow Air, and it is going to be with Batch Air, and it is going to be with anybody else, including the scheds.

I just think that there is a new competitive thing with deregulation and cutting prices down, and everything is great. You can fly halfway around the world for 29 bucks these days on some airlines, and I don't know they are doing it. It means the pressures are there to cut every corner you can cut. It is awful easy to say, "Well, we won't come up to the standards we previously had for maintenance. It's a good place to cut."

That is the last place that people better be cutting. And pilot training and personnel are the last thing they ought to be cutting. Because every time there is one of these crashes, it is not only expensive, but it is the most horrendous tragedy for the persons involved, and I know you share that feeling very, very deeply. I am not inferring that you don't. I am sure no one was more grieved and continues to be grieved than you were when one of your planes was involved in something like that.

But what we want to do is, in this new competitive position among airlines and in air service, we want to make sure it is done as safety as possible, and if we have to split up functions and make some new organizations, that is what this committee is charged with, to see that the people of this country are properly protected.

So that is what this is all about here. I just wanted to put it back in the proper context. If we need more people and equipment or training or whatever it is we need, that is what we want to see that you get. We don't want to see any more tragedies. I know that you don't, either; I am not saying you do.

We appreciate your cooperation on this, but I just hope that every air carrier in this country is getting some message out of this hearing, perhaps, and the ones that will follow next week, and I hope others beyond that, if we need them, because we are serious about this thing, and whatever we need to do, if we need to have heads roll, we are going to do our level best to see that the heads roll.

If we need new Government organizations, we are going to see to it that we push for new Government organizations; if we need more money spent on inspections, and I hope those inspections aren't necessary. A perfectly operating industry wouldn't require inspection. People would be self-inspected, making sure they are not cutting corners. But if we require inspectors, more of them, to make sure that people live up to not only the letter, but the spirit of the law, then that is what we are going to do.

Thank you, Mr. Chairman.

Chairman **Roth**. Mr. Rinzel.

Mr. **Rinzel**. Mr. Chairman, I have some questions for Mr. Batchelor. It has been alleged, Mr. Batchelor, by a previous witness, that you operate Arrow Air primarily as a conduit to enhance the value of aircraft in your aircraft leasing business. Records supplied to the subcommittee by your attorney indicate that of approximately 39 aircraft that were leased to Arrow between 1981 and 1986 by companies you own and subsequently leased or sold elsewhere, more than one-third of thos aircraft were in service with Arrow for only 1 year or less.

Do you use Arrow as a vehicle for increasing the value of aircraft that your air leasing company owns?

Mr. **Batchelor**. No.

[At this point, Senator Gore withdrew from the hearing room.]

Mr. **Rinzel**. Isn't it true, sir, that an aircraft that is in certificated service is of more value than an aircraft of the same age and condition that is not in certificated service? Isn't that a fact, generally?

Mr. **Batchelor**. That is not necessarily true. The older the aircraft is, the more hours and time it has on it——

Mr. Rinzel. I am assuming they are the same age and length of service.

Mr. Batchelor [continuing]. The less its value. If I may, let me comment on a couple of items here. Arrow spent—I forget. I think Senator Glenn, it was you or Senator Gore that mentioned the percentage of revenues that was spent on maintenance.

Senator Glenn. Yes; that may be an unfair figure. Let me make sure of that.

Mr. Batchelor. No; Arrow spent 17 percent of their revenue, which is just about double what most airlines are spending today on maintenance.

Senator Glenn. The figures I had were before deregulation, airlines devoted 12 to 30 percent of their budgets to maintenance, and the figure today averages 7.6 percent. Maybe other factors enter in there. Total costs have gone up. That would be a drastic cut.

Mr. Batchelor. But Arrow is about double the average of other airlines today on maintenance.

Batch Air, incidentally, overhauls every part in their shop that the FAA claims is a foreign part. It would have been a simple matter if the FAA had said, "Hey, we don't like the foreign tags; we don't approve Iberia as an FAA-approved repair station."

We could very easily and would have taken them off the airplane, run them through our shops, which is approved, and we could use them then. There was no intent to mislead the FAA or not do it right.

Mr. Rinzel. Mr. Batchelor, from records that you supplied to us, it appears, for an example, one of your companies bought an aircraft in January 1984 for $225,000; leased it to Arrow from January 1984 until August 1984 for $40,000 a month and resold the aircraft for $1,027,250.

It appears to me that lends support to the argument that aircraft that are in certificated service are worth more than the ones that aren't. Isn't that true?

Mr. Batchelor. No, sir; Let me comment. The document you are looking at, I asked, I told, our attorney, "We couldn't prepare this document."

It was impossible to prepare it accurately based on the short period of time from when we got the request for it——

Mr. Rinzel. You are saying the figures that were given to us are erroneous, sir.

Mr. Batchelor. That's right, I am saying and I told my attorney that and asked him to tell the staff. Let me continue, if I may, sir. You brought it up. The one, the date is wrong when we bought the aircraft. But we bought it sometime before. Also, this was an aircraft that McDonnell Douglas had leased to Braniff. Braniff wore the airplane out before they returned it off lease. They used up whatever there was to use up in it.

After we got the aircraft, we had to replace all the engines. Just as an example, the average cost of replacing an engine with a zero time engine is somewhere between $150,000 and $200,000. You want to take the $225,000 and add the cost of the maintenance. We put a different type engine on with more thrust. The 3B had 18,000 pounds of thrust; the ones that were on the plane were 7's, which have 19,000 pounds thrust. By the time we got through, we probably spent close to $1 million on that airplane in the intervening period.

Mr. RINZEL. Are you saying you lost money on this?

Mr. BATCHELOR. No, sir, I'm not saying that. I'm trying to make money, and I have lost money on Arrow.

Mr. RINZEL. Arrow, as a matter of fact, has operated at a loss for 2 out of the last 3 years, hasn't it?

Mr. BATCHELOR. Arrow has operated at a loss every year since it has been in business except the year up to the date of the accident.

Mr. RINZEL. The first 9 months of 1986.

Mr. BATCHELOR. It has turned around over the last 6 months since Mr. Skully and new management arrived. It had grossed $12 million in profit before the accident occurred.

Mr. RINZEL. When you lease planes, do you ever include maintenance?

Mr. BATCHELOR. Yes, sir.

Mr. RINZEL. In other words, you will do the maintenance through Batch Air?

Mr. BATCHELOR. Yes, sir.

Mr. RINZEL. Have you ever, at any time, had a practice or have you ever, even a single time, pulled a plane out of a lease to another company, leased it temporarily to when it was up for a major maintenance overall and then charged the maintenance to Arrow Air?

Mr. BATCHELOR. Absolutely not.

Mr. RINZEL. That has never been done?

Mr. BATCHELOR. Never. International is profitable; Batch Air is profitable. Arrow has lost money. There is no consolidation. I don't know how you can lose money and come out ahead. If it was anything, we have done the opposite.

Mr. RINZEL. What you would have to do, sir, would be to make more money on International Air Leasing by having the maintenance charged against Arrow Air.

Mr. BATCHELOR. Rather than having the money to pay, they end up owing us money. We are the big creditor.

Mr. RINZEL. Rather than charging the money against Batch Air and International Leasing.

Mr. BATCHELOR. That is false economy. It can't be done.

Mr. RINZEL. It depends what your profit and loss statement and tax situation on the other companies is.

Mr. BATCHELOR. No, sir.

Mr. RINZEL. It doesn't at all?

Mr. BATCHELOR. No, sir.

Mr. RINZEL. It all comes out in the wash?

Mr. BATCHELOR. No; it doesn't all come out in the wash. Just the opposite is true. Arrow is losing money. Batch Air is making money. Batch Air is maintaining profits. If anything, Batch Air would do maintenance at a discount for Arrow.

Mr. RINZEL. Why do you run so many planes through Arrow Air, sir? Why do you have such an inventory of planes?

Mr. BATCHELOR. If you will note, we have been cutting the company back for 2 years, making the company smaller and more efficient. That is why it became profitable.

Mr. **Rinzel**. I don't think that answers the question of why you are running so many planes by Arrow Air.

Mr. **Batchelor**. We are not now.

Mr. **Rinzel**. I don't have any further questions.

Chairman **Roth**. Senator Glenn has one.

Senator **Glenn**. Just one. How many other airlines, either sched or nonsched, use Batch Air for a substantial part of their maintenance?

Mr. **Batchelor**. About 70 other airlines, including the U.S. Air Force, NASA, Air Canada, Continental, Braniff, Alaska.

Senator **Glenn**. Major or all of their maintenance?

Mr. **Batchelor**. Different phases, different components; engine overhauls, aircraft overhauls.

Senator **Glenn**. Does the committee have that in our records?

I would like, if you could give us a statement on that, we can include it in the record, as to the scope of our activities and how many airlines you do work for, sched or nonsched, the whole works.[1]

Mr. **Batchelor**. Yes, sir; and additionally, we feel we have some management people that have some experience in this industry. We are interested in air safety. and we will volunteer our time and effort to help come up with areas where we think safety can be improved. It's not just loading manpower on the FAA. You have got to have qualified people, and we have to have the tools to work with.

Chairman **Roth**. If you would submit that information, it would be appreciated. The record will be kept open for 5 days in the event anybody has additional questions.

Thank you very much.

Mr. **Batchelor**. Thank you, sir.

[The prepared statements of Messrs. Batchelor and Skully follow:]

---

[1] The material referred to was retained in the subcommittee files.

PREPARED STATEMENT OF GEORGE E. BATCHELOR

Mr. Chairman, my name is George E. Batchelor. I am the Chairman of Arrow Air. It is with profound regret and sorrow that Arrow Air appears before this Subcommittee today. The tragedy of the crash of our DC-8 at Gander Airport in Newfoundland, Canada with the loss of 248 U.S. servicemen and women and 8 Arrow crew members remains a heavy burden and grievous loss for the entire Arrow Air family. This is a deep loss to me personally.

Rarely has a waking moment gone by since the accident that I have not thought of our military servicemen and women who lost their lives at Gander and of their families. Rarely has a waking moment gone by since the accident that I have not thought of the Arrow Air crew members who lost their lives at Gander and of their families. They were all outstanding men and women and their loss is tragic in every sense.

As Chairman of Arrow Air, I have directed that every effort be made to cooperate with this Subcommittee. I have requested similar cooperation of all Arrow Air employees in our dealings with the Canadian Aviation Safety Board, the U.S. Federal Aviation Administration, and the U.S. National Transportation Safety Board.

At this time, Arrow Air wishes it had more information to provide the Subcommittee regarding the cause of the accident at Gander Airport. However, we have received very little information from those authorities charged with investigating this matter.

I founded a company called Arrow Airways, Inc., in 1947 in Torrance, California, following active duty as a pilot in the U.S. Army Air Force during World War II. Arrow Airways originally flew DC-3 charter service between Southern California and Washington State, and subsequently expanded charter operations nationwide.

In the early 1950's, Arrow Airways ceased operations due to a change in U.S. aviation policy. I became primarily involved in buying, selling, and leasing aircraft and aircraft engines, and the maintenance of aircraft and aircraft components.

A new company named Arrow Air was issued a commercial carrier certificate from the FAA and Arrow Air began domestic cargo operations, as well as initiating overseas cargo and passenger charter operations. Scheduled passenger operations started in late 1982 to early 1983.

Because of my ongoing management commitments to the operation of International Air Leases and Batch-Air, I have not been involved in the day-to-day operations of Arrow Air except for a very short period of time in early 1984. During the entire existence of Arrow Air, I have always sought to find the best talent available to execute the day-to-day policies of the airline. Although the management personnel we hired always possessed vast experience, it has been necessary to make changes during the last 5 years as some of our managers did not live up to our expectations or did not fit the needs of the company at a given point in time.

In early 1984, I became President of Arrow Air and involved myself in its daily management. At that time I hired Richard Skully as Vice President for Operations and Maintenance. Mr. Skully had a long and distinguished career at the FAA and at a scheduled airline and is considered one of the best operations and maintenance men in the industry.

During this period, I sought to determine what types of activities Arrow Air should and should not be undertaking as a business. Arrow Air operations included charters, both civilian and military, air cargo service, and scheduled airline service. By the end of 1983, Arrow had moved rapidly into scheduled passenger service and redirection was needed if Arrow was to be profitable, and indeed in 1985 Arrow became profitable. After sorting these matters out and setting a course for the company, Arrow hired a new president and I relinquished my active role.

I hope to impress upon the Subcommittee the utmost concern of Arrow Air -- as well as all other aviation-related companies I am affiliated with -- regarding proper airline operation and maintenance, and the importance of air safety.

Much has been said since the Gander tragedy in the media and here in Washington. Unfortunately, much of what has been said has been misinformed. I wish to publicly state at this time that Arrow Air was and is a safe airline.

The people who run Arrow Air are airline people first, business people second, from chief executive officer on down. I considered myself a pilot a long time before I considered myself a businessman. The number one consideration of any pilot or any person associated with an airline is the safe operation and proper maintenance of their aircraft. To suggest that economic considerations superceded the proper performance of airline operation and maintenance at Arrow Air is absurd.

Although my day-to-day presence at Arrow has been limited, it has always been my specific direction to all Arrow personnel that there is only one way to do things when it comes to safety -- the right way. We have never placed any limits on budgetary resources needed for maintenance. Indeed, Arrow expenditures for maintenance as a percentage of revenues has been nearly double the industry average. We have hired only seasoned and experienced pilots, many of whom have flown for the major scheduled airlines. At no time did I or would I ask a pilot to fly an aircraft he believed to be unsafe.

In the last few weeks, I have heard allegations that Arrow management applied pressure to Arrow pilots to fly an aircraft the pilots thought were unsafe. I have great difficulty believing this could have happened. If it did occur, I am disappointed that the pilots in question did not report the incident to me. I can assure you that I would not have tolerated such behavior.

I would also point out that Arrow Air, like other airlines, is highly regulated by the FAA. Arrow received a thorough inspection by the FAA in 1983 after which the FAA made a number of recommendations. Arrow implemented those recommendations.

In 1984, the FAA's National Air Transportation Inspection team exhaustively surveyed Arrow's operations and more FAA recommendations were made and implemented. In late summer 1985, Arrow was again inspected. This time few changes were suggested, and, of course, we complied with their suggestions. We have always tried to cooperate with the FAA and have tried to benefit from their suggestions on improving our operations.

Since the Gander tragedy, there have been many reports from sources that have claimed to have specific knowledge of Arrow Air's operations and maintenance policies and history. I would urge the Subcommittee to objectively evaluate all such claims. I extend to the Subcommittee my complete cooperation and assistance in doing so.

At present, I am concerned that the tremendous emotional issues involving the Gander tragedy not be used to allow a one-sided and biased presentation against Arrow Air. In stating this concern, I also state that Arrow Air is not a perfect airline with a perfect record of aircraft operations and maintenance. We have never claimed to be. I do not believe there is perfection in this industry or any other industry. We have made mistakes. However, Arrow Air has tried extremely hard to do its very best. I sincerely believe that Arrow's operations can compare favorably to any in the industry.

In conclusion, I would ask the Subcommittee's permission that the February 18, 1986 statement of the Arrow Pilots Association, the collective bargaining unit representing Arrow Air pilots, be entered into the hearing record. I would only quote one paragraph from that statement:

> "The crew on Flight 1285 was led by Captain John Griffin who came to Arrow having been furloughed by Pan Am. During his time with Arrow he served as chief pilot, vice president of operations, and was an FAA-approved check airman on the DC-8. His first officer Bob Connelley and flight engineer Mike Fowler were both retired military flight crew. Somehow in all the excitement to divulge all the misinformation about Arrow, the media has failed to tell the public that the crew flying this airplane was highly motivated to do a good job, and under no pressure from anyone to fly an airplane that was not safe to fly. These people, and we include the flight attendants, gave up their lives on a mission of peace. Unfortunately for their families and fellow workers, the events leading up to their last flight have already been prejudged based on hearsay and speculation."

Mr. Chairman, notwithstanding the agony of second-guessing that follows any tragedy, it is my hope and the hope of all the employees at Arrow Air that we honor the memories of our colleagues as well as the memories of our servicemen by considering the issues here today with candor, sincerity, and objectivity. I appreciate the opportunity to appear before this Subcommittee, and I will try my best to answer your questions.

ON BEHALF OF THE ARROW PILOTS ASSOC., I WOULD LIKE TO READ THE FOLLOWING STATEMENT;

MUCH HAS BEEN SAID AND WRITTEN ABOUT THE EVENTS LEADING UP TO THE TRAGIC ACCIDENT IN GANDER ON DECEMBER 12, 1985. THE ONLY GROUP THAT HAS REMAINED SILENT THROUGHOUT THIS WHOLE ORDEAL HAS BEEN ARROW'S PILOT GROUP. WE HAVE NOT BEEN ASKED NOR HAVE WE OFFERED TO COMMENT ON ANY OF THE ALLEGATIONS OR PIECES OF MISINFORMATION THAT HAVE BEEN MADE. WE HAVE KEPT OUR SILENCE, NOT BECAUSE WE ARE ASHAMED OF WHAT WE DO OR THAT WE HAVE ANYTHING TO HIDE, BUT BECAUSE WE HAVE FELT ALL ALONG THAT THE TRUTH WILL COME OUT, AND WE, AS PROFESSIONAL PILOTS DO NOT NEED TO DEFEND TO ANYONE, HOW WE DO OUR JOBS.

WE HAVE MAINTAINED OUR PROFESSIONALISM, OUR SILENCE, UNTIL NOW.

THE PUBLIC DESERVES BOTH SIDES OF THE STORY WHICH TO THIS POINT HAS BEEN ONE SIDED. THE STORY HAS BEEN TWISTED BY THE MEDIA FROM A TRAGIC PLANE CRASH AND ITS CAUSE INTO A WITCH HUNT BY CONGRESS AND THE FAA TO DIVERT ATTENTION AND PRESSURE AWAY FROM THEM AND ON TO ARROW AIR. AS OF TODAY, THERE IS STILL NO ANSWER AS TO WHY OUR AIRPLANE CRASHED-NOT EVEN A PROBABLE CAUSE. YET THE FAA, PRESSURED BY CONGRESS AND THE MEDIA, HAS ACTED IRRESPONSIBLY AND INCOMPETENTLY IN BRINGING ABOUT ACTIONS AGAINST ARROW TO FORCE IT TO DRASTICALLY ALTER THE WAY IT OPERATES.

NOTHING TO DATE HAS BEEN SAID ABOUT THE DEDICATED PROFESSIONALS THAT CONTINUE TO FLY FOR ARROW AMID ALL THIS CONTROVERSY.

1.) IS THE PUBLIC AWARE THAT MANY OF ARROW'S PILOTS ARE FURLOUGHED FROM OTHER AIRLINES SUCH AS PAN AM, FLYING TIGERS, AND UNITED?
2.) IS THE PUBLIC AWARE THAT ARROW'S PILOTS MUST OPERATE UNDER THE SAME FEDERAL REGULATIONS THAT EVERY MAJOR AIR CARRIER MUST FOLLOW?
3.) IS THE PUBLIC AWARE THAT ARROW'S PILOTS USE THE SAME TRAINING AIDS AND FLIGHT SIMULATORS USED BY A MAJOR CARRIER?
4.) DOES THE PUBLIC KNOW THAT ARROW'S CAPTAINS HAVE THE FINAL AUTHORITY GIVEN THEM BY LAW TO SAY WHETHER AN AIRPLANE IS SAFE FOR FLIGHT AND THAT NO COMPANY OFFICIAL CAN FORCE HIM TO TAKE AN UNSAFE AIRPLANE?

THE PILOTS FLYING FOR ARROW ARE DEDICATED PROFESSIONALS WITH MANY YEARS EXPERIENCE. UNFORTUNATELY FOR US, WE ALSO HAVE TO ANSWER FOR A FEW FORMER DISGRUNTLED EMPLOYEES WHO HAVE LEFT ARROW UNDER LESS THAN IDEAL CIRCUMSTANCES. THE PUBLIC SHOULD KNOW WHO THESE PEOPLE ARE AND WHY THEY NO LONGER WORK FOR ARROW.

THE PUBLIC SHOULD KNOW THAT UP TO THIS POINT ALL OF THE INFORMATION THAT - CONGRESSIONAL INVESTIGATING COMMITTEES, THE MEDIA, AND THE FAA HAVE RECEIVED HAS BEEN FROM THESE INDIVIDUALS. NOTHING THAT HAS APPEARED IN PRINT OR ON THE MEDIA HAS COME FROM ANY PILOT THAT IS ACTIVELY FLYING FOR ARROW. THE ALLEGATIONS AND MISINFORMATION PROVIDED BY THE SO CALLED EXPERTS AND FORMER ARROW PILOTS ARE BASED ON HEARSAY AND SPECULATION. THESE PEOPLE ARE RELIED UPON AS KNOWLEDGEABLE WHEN IN FACT THEY ARE LESS THAN HONEST INDIVIDUALS WHO USE A TRAGIC EVENT TO SEEK THE SPOTLIGHT FOR THEMSELVES.

THE CREW ON FLIGHT 1285 WAS LED BY CAPT JOHN GRIFFIN WHO CAME TO ARROW HAVING BEEN FURLOUGHED BY PAN AM. DURING HIS TIME WITH ARROW HE SERVED AS CHIEF PILOT, VICE PRES. OF OPERATIONS, AND WAS AN FAA APPROVED CHECK AIRMAN ON THE DC-8. HIS FIRST OFFICER BOB CONNELLEY AND FLIGHT ENGINEER MIKE FOWLER WERE BOTH RETIRED MILITARY FLIGHT CREW. SOMEHOW IN ALL THE EXCITEMENT TO DIVULGE ALL THE MISINFORMATION ABOUT ARROW, THE MEDIA HAS FAILED TO TELL THE PUBLIC THAT THE CREW FLYING THIS AIRPLANE WAS HIGHLY MOTIVATED TO DO A GOOD JOB, AND UNDER NO PRESSURE FROM ANYONE TO FLY AN AIRPLANE THAT WAS NOT SAFE TO FLY. THSES PEOPLE, AND I INCLUDE THE FLIGHT ATTENDANTS, GAVE UP THEIR LIVES ON A MISSION OF PEACE. UNFORTUNATELY FOR THEIR FAMILIES AND FELLOW WORKERS, THE EVENT LEADING UP TO THEIR LAST FLIGHT HAVE ALREADY BEEN PREJUDGED BASED ON HEARSAY AND SPECULATION.

FEBURARY 11, 1986, WAS A RED LETTER DAY IN THE EYES OF THE UNINFORMED AND ALL-TRUSTING PUBLIC. ARROW AIR WAS FORCED TO SEEK CHAPTER 11 PROTECTION DUE TO THE UNWARRANTED AND UNPRECENDENTED ADVERSE PUBLICITY THAT ARROW HAS RECEIVED SINCE THE DECEMBER 12TH GANDER ACCIDENT.

NO OTHER AVIATION ACCIDENT HAS COMMANDED THIS MUCH ATTENTION FROM THE MEDIA, THE CONGRESS, OR THE FAA. A TREMENDOUS TEAM EFFORT LED BY THE MEDIA HAS SUCCEEDED IN BRINGING ABOUT EXTREME PUBLIC PRESSURE ON CONGRESS, THE MILITARY AIRLIFT COMMAND, AND THE FAA TO EXAMINE ALL THE HEARSAY AND BRING ABOUT A RAPID CONCLUSION TO THIS TERRIBLE TRAGEDY THAT HAS AFFECTED SO MANY PEOPLE.

NO OTHER AVIATION ACCIDENT HAS COMMANDED SO MUCH ATTENTION FROM THE MEDIA, THE CONGRESS, OR THE FAA AND YET BROUGHT ABOUT SO LITTLE IN THE WAY OF FACTUAL RESULTS.

WHY HAVE SO MANY QUESTIONS REMAINED UNANSWERED SUCH AS:

1.) WHY WAS THE POSSIBILITY OF SABOTAGE RULED OUT BEFORE THE INVESTIGATION EVEN BEGAN?
2.) WHY WERE 3 EYE WITNESS ACCOUNTS TELLING OF EXPLOSIONS IN THE AIR DISCOUNTED?
3.) WHO IN THE MILITARY KNOWS WHAT WAS IN THE PASSENGER DUFFEL BAGS THAT WERE IN CAIRO FOR 24 HOURS PROIR TO BEING LOADED?
4.) WHY ARE QUESTIONS LIKE THESE BEING EVADED?
5.) WHY WON'T THE FAA TELL ARROW WHAT SPECIFIC REGULATIONS WERE USED TO ITS AIRPLANES.

EVEN THOUGH, AS FAR AS THE MEDIA, CONGRESS, AND THE FAA ARE CONCERNED, THE PROBLEM HAS BEEN SOLVED-ARROW IS EFFECTIVELY OUT OF BUSINESS-THE TRUTH HAS YET TO BE KNOWN. MANY OF ARROW'S PILOTS ARE NOW OUT OF WORK. BUT FOR US, THE PRESSURE IS STILL ON TO FIND OUT WHY OUR AIRPLANE CRASHED. WE WANT TO KNOW-WHATEVER THE REASON MAY BE. WE WILL NOT FORGET THE CREW ON FLT 1285. WE WILL KEEP SEARCHING UNTIL THE ANSWER IS FOUND.

HOPEFULLY SOME GOOD WILL COME FROM ALL OF THIS AND WE CAN LEARN SOMETHING FROM OUR PAST MISTAKES. I WISH I COULD SAY THE SAME FOR THOSE PEOPLE AND AGENCIES THAT MADE IT THEIR SPECIAL PURPOSE IN LIFE TO BRING US DOWN. YOU ARE ALL SATISFIED-NOW-UNTIL THE NEXT TIME.

ARROW PILOTS ASSOCIATION/FEBRUARY 18, 1986

PREPARED STATEMENT OF RICHARD P. SKULLY

Mr. Chairman, my name is Richard Skully. Following service as a pilot in World War II, I served as an operations inspector at several field offices with the U.S. Federal Aviation Administration from 1947 to 1962. From 1962 to 1978, I held various senior executive positions and concluded my government service in Washington, D.C., as Director of the Office of Flight Standards. In 1978, I was employed by Air Florida as Senior Vice President, Operations and Maintenance.

In February 1984, I was hired as the Senior Vice President for Operations and Maintenance for Arrow Air in Miami, Florida. When Mr. Batchelor offered me this job at Arrow Air, he informed that he wanted the safest and best maintained airline possible. He further informed me that I would have the authority to assemble a highly-qualified and experienced operations and maintenance team for Arrow Air. I exercised that authority. In some instances that required creating and filling new positions.

As a result of the operations and maintenance practices employed during my tenure at Arrow Air, I firmly believe the record of Arrow Air has been a good one. My primary reason for believing this is because the operations and maintenance personnel at Arrow Air are dedicated, competent, and knowledgeable professionals.

Much has been said and written since the crash of our DC-8 in Gander, Newfoundland about the operations and maintenance practices of Arrow Air. Although I cannot speak with authority regarding the operations and maintenance practices before I arrived at Arrow Air, I can speak with some particularity about our operations and maintenance practices since I arrived.

I would like to address several issues regarding Arrow Air operations and maintenance practices that have been receiving no small amount of notoriety recently.

The first matter is the issue that has been raised regarding the frequency of FAA inspections conducted at Arrow Air. Arrow Air is a certified air carrier operating under regulations promulgated by the Federal Aviation Administration. This means Arrow Air is subject to the same stringent operations and maintenance standards as the major commercial arilines. Adherence to FAA regulations and standards is determined by FAA inspections. Every domestic airline is regularly inspected by the FAA. Arrow Air is no exception. We have been inspected more frequently than some carriers, less frequently than others.

For example, in March 1984, shortly after my arrival, the FAA conducted a two-phase National Air Transportation Inspection of Arrow Air. The second phase of the National Air

Transportation Inspection was rigorously conducted over a 10-day period. It was a total inspection and evaluation of Arrow Air's ability to comply with the Federal Aviation Regulations.

I would be less than candid if I did not point out that the FAA found certain deficiencies in Arrow's operations, particularly in regard to recordkeeping requirements. These deficiencies were noted in an FAA report. The FAA recommendations made to Arrow Air regarding resolution of these deficiencies were appropriately implemented by Arrow.

I should also note that during my career at FAA I saw many reports such as the 1984 National Air Transportation Inspection report on Arrow. I did not view this report as a particularly bad report, compared to others I have read. It was quite helpful to me, as a new manager, in spotting problem areas and setting a course to correct them.

During the summer of 1984, there was a FAA follow-up inspection to the previously-conducted National Air Transportation Inspection. The FAA report of the follow-up inspection noted Arrow's progress in implementing the FAA's recommendations. In August 1985, the FAA conducted another thorough inspection of Arrow. It found no serious fault with our operations at that time and had few recommendations for improvement. As you know, the FAA has just concluded another exhaustive investigation of Arrow.

Hence, my response to allegations that Arrow Air can be characterized an unsafe airline merely because of the frequency of FAA inspections is that, on the contrary, the very fact of these inspections and their results has indicated just what the inspections set out to determine, that is, that Arrow Air does comply with air safety regulations and that there has been no reason to even consider denying Arrow Air the authority to fly.

I have taken my job as head of Arrow's operations and maintenance programs very seriously. Since I assumed this position 2 years ago, I have made every effort to hold regular meetings with all department heads to ensure that communication flows both vertically and horizontally within the company. I believe my leadership has helped to eliminate many problem areas that may have existed before I arrived at Arrow.

At the time he hired me, Mr. Batchelor made the commitment that Arrow Air would not be operated with any constraints relating to safety. I believe he has honored that commitment.

I would also like to point out that it is a tremendous advantage for Arrow Air to be affiliated with the other aviation-related businesses owned by Mr. Batchelor. For example, Batch Air, which performs a great deal of aircraft maintenance for the Boeing Corporation, among others, performs maintenance services for Arrow Air aircraft on a credit basis rather than on a non-credit basis. Credit is hard to come by for most small airlines. Thus, there have not been any financial constraints at Arrow Air to defer any necessary maintenance or repairs.

I would also ask the Subcommittee to consider Arrow's maintenance practices with respect to the type of service Arrow provides. Although Arrow Air may be called a small airline, we certainly could not be considered a regional or a commuter airline. We have provided charter service throughout the world, which necessarily requires a top-notch maintenance program. If an airplane malfunctions and is somewhere in a far corner of the world, it is very difficult to service it and it costs a lot of money to do so. Although there may be no federal regulations making such distinctions, I can assure the Subcommittee that maintenance has the highest priority when you are flying aircraft to the Pacific Ocean and the Indian Ocean as opposed to flying to an adjoining state.

I would also like to briefly discuss three issues relating to Arrow operations and maintenance which have recently received attention in the media.

The first issue is the so-called "tail strike" incident at Grand Rapids Airport in November of last year. Due to a center of gravity problem resulting from load imbalance, as one of our DC-8's was taking off, the tail of the airplane struck the runway. The pilot discontinued the take-off, went back to the terminal to adjust the load, and then took off again. This was not Arrow policy. The policy requires the pilot to inspect the tail skid to ascertain the extent of damage. If there were no damages, then he could have taken off again. Arrow policy further required that the pilot report the incident. In this case the pilot did not follow Arrow Air policy.

Arrow management did not discover this incident until it was publicized following the Gander accident. When we did learn of it, we immediately investigated the incident and as a result the pilot involved was suspended.

A DC-8 tail strike is not necessarily a serious incident. While such incidents can, of course, be serious, tail strikes in DC-8's do infrequently happen. For this reason, the DC-8 is constructed to withstand tail strikes. The DC-8 has a special skid and a replaceable crush-can which functions as a shock absorber. If the tail strike had been serious, the crush-can would have been compressed. Arrow Air policy calls for inspection of the tail section in the event that the crush-can is compressed. In this incident, the crush-can was not damaged.

The second issue is the discontinued take-off of an Arrow DC-8 in Ohio in July of 1985. As in the case with a tail strike, another infrequent event that can and does happen in DC-8's is for an engine bleed valve to malfunction when full power is applied to the engine. The bleed valve sticks and creates what is known as a compressor stall. In such an instance, the pilot generally discontinues take-off, returns the aircraft to the terminal, and the needed maintenance performed. That is exactly what happened in this instance. There was absolutely nothing wrong with the procedure followed by the Arrow crew in this incident. In fact, the crew used good judgment.

To allege that an aborted take-off in these circumstances is indicative of poor maintenance or operation or an unsafe aircraft is both patently unreasonable and not consistent with a proper knowledge of DC-8 aircraft operation.

The third issue involved the use by Arrow of spare parts which had been overhauled in Europe. The spare parts in question were purchased from Iberia, the national airline of Spain.

Generally, whenever an aircraft is purchased, the purchase includes the spare parts dedicated to that aircraft. Those were the circumstances involved here.

At the time the aircraft was purchased and imported from Spain to the United States, it received a certificate of air-worthiness. The airplane in question had Iberia overhauled parts in it when it received its certificate. I would also point out that the Iberia maintenance facilities are excellent and indeed, are certified by the FAA. The parts in question were manufactured in the United States, and simply overhauled by Iberia. It is for this reason that we were confident in continuing to use these parts on our aircraft. We used those parts with the knowledge of the FAA and continue to believe that we had done absolutely nothing wrong.

I believe Arrow Air has made great strides and is a safe and reliable air carrier. I firmly believe that when the investigation of the Gander accident is completed, it will vindicate the dedicated operation and maintenance professionals at Arrow Air.

Chairman ROTH. The subcommittee is in recess.

[Whereupon, at 1:35 p.m., the subcommittee was recessed to reconvene at the call of the Chair.]

AIRLINE SAFETY

THURSDAY, MARCH 13, 1986

U.S. SENATE,
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS,
COMMITTEE ON GOVERNMENTAL AFFAIRS,
Washington, DC.

The subcommittee met at 9:34 a.m., in room SD-342, Dirksen Senate Office Building, under authority of Senate Resolution 353, section 13, dated March 13, 1986, Hon. William V. Roth, Jr. (chairman of the subcommittee) presiding.

Members of the subcommittee present: Senator William V. Roth, Jr., Republican, Delaware; Senator William S. Cohen, Republican, Maine; Senator Thad Cochran, Republican, Mississippi; Senator Sam Nunn, Democrat, Georgia; Senator John Glenn, Democrat, Ohio; Senator Carl Levin, Democrat, Michigan; and Senator Albert A. Gore, Jr., Democrat, Tennessee.

Members of the professional staff present: Daniel F. Rinzel, chief counsel; Eleanore, J. Hill, chief counsel to the minority; Kathleen Dias, executive secretary to the minority; Mary Robertson, assistant chief clerk, minority; Carla Martin, acting chief clerk; Susan Lebeaux, staff counsel; Lenny Willis, minority investigator; Glenn Fry, minority staff counsel; Mary Vinson, staff investigator; Sally Cribbs, executive assistant to the chief counsel; Barbara Kammerman, deputy chief counsel; John Sopko, minority staff counsel; and Charlie Osolin, press secretary.

OPENING STATEMENT OF CHAIRMAN ROTH

Chairman ROTH. The subcommittee will please be in order.

This morning the Permanent Subcommittee on Investigations continues its examination of the current condition of U.S. air safety.

In our first hearing on March 6, we heard from a number of people, including pilots, about the safety problems they face in the rapidly changing and growing airline environment. Today, we will hear from current and former Federal Aviation Administration officials, the people responsible for both promoting and policing the airline industry. We are anxious to hear FAA's explanation for the unsafe conditions described during our first day of hearings. We are also interested in hearing whether these conditions are unique to the small carriers.

The bottom line for the Federal Aviation Administration must be assuring safe air travel for the public. The best preconceived precautions are useless without an effective enforcement program. If there is a hole in the Federal Aviation Administration air safety net, we must identify and close it.

At the same time, we must recognize that responsibility for safety in the airline industry does not end with the Federal Aviation Administration. That responsibility must be shared by, in fact, in many ways, it is primarily that of the airline owners, the flight crew, maintenance personnel, ground crew, along with aircraft manufacturers and others.

They all have an equally important duty to make sure safety has been achieved every time a plane taxis down the runway. We cannot and will not tolerate any near misses in this area.

We commend the Federal Aviation Administration for the genuine efforts it has taken in recent years to scrutinize and improve its inspection and surveillance system. We seek assurances, however, that these efforts are not being diluted by other forces within the system.

I look forward to the testimony we will hear today as we continue to examine ways to tighten the safety belt on the airline industry.

Senator Nunn.

OPENING STATEMENT OF SENATOR NUNN

Senator **Nunn**. Thank you very much, Mr. Chairman. I am pleased to join with you this morning as the subcommittee focuses again on the question of safety in this Nation's commercial air traffic. According to published reports, U.S. passengers now take an estimated 360 million air trips per year with an estimated 7 out of every 10 Americans having flown at least once in their lives. More and more Americans, by choice or by necessity, are relying on the good faith of the airline industry and the FAA to maintain the highest possible degree of safety in the operation of commercial aircraft.

In that context I was greatly disturbed by the testimony last week before this subcommittee from a panel of three airline pilots. Their descriptions of firsthand experience within the airline industry was, at the every least, frightening: Planes operating with excessive numbers of deferred or inoperable maintenance items; physically exhausted pilots flying in violation of the FAA's flight duty limitations; slipshod maintenance practices as a way to cut corners on cost. Moreover, the pilot's reluctance to bring these previously unknown complaints before the FAA calls the ability of the Federal Government to effectively enforce basic safety standards within the airline industry into question.

With the memory of last year's tragic air fatality toll still fresh in our minds, that testimony paints a truly alarming portrait of commercial aviation.

This morning, we will again have the opportunity to hear from individuals who come to us with the benefit of firsthand experience with the airline industry. Today, we will hear from those who have borne the responsibility for enforcing the requirements of the Federal aviation regulations. In contrast to the pilots who testified last week, we will hear this morning from retired and current representatives of the FAA.

I look forward to the testimony of Harry Langdon, James Alley, and Melvin Derry, all having retired from extensive service with the FAA. Together, they bring us the benefit of a total of 68 years of experience in the regulation of the airline industry in the United States. Their careers have followed the airline industry as it has changed considerably in the transition period following deregulation. I am hopeful they can give this subcommittee some realistic and invaluable insight on some of the most critical problems the FAA inspectors encounter in attempting to enforce those safety requirements mandated by the Federal aviation regulations.

Melvin Derry was called back from retirement by the FAA in 1984 as part of a special task force created to evaluate the inspection reports of the national aviation transportation inspections phases 1 and 2. In conducting that evaluation, the task force examined over 13,000 NATI inspection reports. Based on that review, as well as his own personal experience, I expect that Mr. Derry will be able to give on an overview of problems that exist within the FAA's enforcement efforts as well as the recommendations which the task force made to correct those problems.

I look forward to his testimony as well as the testimony of Mr. Broderick, Associate Administrator of Aviation Safety for the Federal Aviation Administration, who can speak on the FAA's response to the task force recommendations.

We will also hear from retired FAA inspectors Harry Langdon and James Alley, who served on a special FAA inspection team of Continental Airlines in February 1984. They have alleged that there were numerous substantive changes in that inspection report made by higher levels of FAA management. We will hear their own testimony on that.

The subcommittee has been provided with both the original draft report as well as the final report which was eventually released by the FAA under the Freedom of Information Act in December 1984. I am interested in having the factual basis for that report put forward by Mr. Langdon and Mr. Alley.[1]

I am also interested in hearing Mr. Broderick's views on that report as well as many of the alleged shortcomings in the FAA's surveillance and certification programs which have been brought to our attention during the course of this investigation, including shortages in manpower; inadequately trained personnel; the lack of standardization among the FAA regions; and an increasingly unmanageable workload in the wake of deregulation. Each of these problems, if not adequately addressed, could pose a serious threat to Federal air safety efforts.

Mr. Chairman, I want to thank you for your cooperation and that of your staff in preparing for these hearings on airline safety. I also want to express my gratitude to Senator Glenn, whose watchful eye and whose own background and experience enabled him to first bring this critically important issue to the attention of our subcommittee. We have benefited from his own considerable expertise in this complex area, and from the fine cooperation of Leonard Weiss of his staff in preparing for these hearings.

---

[1] The information referral to has been retained in the subcommittee files.

Chairman **Roth**. Thank you, Senator Nunn.

Senator Cohen.

Senator **Cohen**. No comment.

Chairman **Roth**. Senator Glenn.

OPENING STATEMENT OF SENATOR GLENN

Senator **Glenn**. Thank you, Mr. Chairman. I don't want anyone to think that these hearings are out to get anyone. What we are trying to do is make sure that we have the safest possible air system in this Nation of ours. Indeed, since our airplanes are used around the world, we want the safest air system around the world, also.

I think there are a number of areas that we have yet to cover with this committee. I had hoped that we would be able, in these hearings, to start out with some examples of the National Transportation Safety Board—they gather all the statistics on air safety—and follow their recommendations to FAA and then see if FAA is organized to do the job, is funded to do the job, has the personnel to do the job, or if they are overworked in areas of air advocacy as opposed to air safety.

[At this point, Senator Chiles entered the hearing room.]

Senator **Glenn**. I wanted to bring these things out, which is our Governmental Affairs job to do, more than any other committee. That is our reason for being, to see that Government is organized to do the job it has to do in these different areas.

So that has yet to be gone into. I hope, Mr. Chairman, we may be able to continue this series of hearings since, so far, we are focusing mainly on the specific examples more than the ability of Government entities to do the job that has to be done. We want the safest possible air system. And I personally pledge that I will work with FAA in making that possible.

We had cuts of inspection personnel of 2,014 down to 1,400 for budgetary reasons at FAA and there were statements in the press by FAA at that time, "Yes, we are going to be more efficient; we are not going to let air safety go down." But we all know you can't do the job that has to be done with fewer people at the very time period when we were deregulated and it was predictable, and it happened, that new carriers were hopping up all over the place. We had new carriers; one after the other hopped up.

I rarely go back to Ohio when I don't see a new little airline of some variety that was not there on the previous trip a week before.

And you see the same thing all over this country. So they were asked to do, as I see it, almost an impossible job in cutting personnel and at the same time, having a bigger job to do, as we deregulated.

Insurance statistics still show that air travel is the safest way to travel, the very safest way to travel. That is a great credit to all of our people and FAA and everyone else. But the point is, we can do it better. It can be made a better system. That is what these hearings are all about.

I want to help FAA do the job to make our whole air system better. I am a user weekly, sometimes two or three times a week. We have the same clearance on my airplane that a 747 has with

300 people on board. It is identical with the same clearance, same procedures, same everything.

I want it to be, obviously, as safe as possible for my family or all of your families and all of you traveling on the airways. It is an enormous job, and the job of our committee is to do the oversight necessary to see to it that FAA does the job right.

I got a letter from a pilot who is flying with an airline now. I won't give his name here, and granted, his letter concerns mainly operations, but he brings up several areas that I think we have to look into and that FAA has to be concerned about.

I wanted to address this briefly. Let me say, first, that I think when most people in this country think of FAA, they think of air traffic controllers. That is what has been out there in the public eye. But FAA is a bigger operation than that. They license new aircraft; the aircraft can't fly until they have gone through with their structural engineers and feel that this thing is safe to go.

They oversee training; they oversee procedures. So it is not just a matter of managing the air traffic control system, which really is the end product of putting all this stuff to work. So I think we need to keep that in mind also.

Now, this airline captain writes; he says he has 22 years, he was a former naval aviator, he has been in commercial aviation 22 years. He wants to make some observations.

He says since airline deregulation, he has seen pilot training reduced, work schedules doubled, aircraft maintenance ignored or inappropriately deferred, fuel reserves cut, new airplanes replaced with 20-year-old models, intimidation of pilots who report mechanical discrepancies, schedules that require pilots to switch between different type aircraft, safety equipment such as liferafts removed from aircraft, and the return of nonstandard cockpit instrumentation equipment.

That is No. 1. I would add to that something that I read in U.S. News & World Report just last night when I was skipping through it. You may have seen that little squib. It is on page 42, and it says, "seller's market for pilots. Owners of short-hop ailines are hopping mad. The carriers are on a hiring binge and worrying away a lot of small airlines. About 40 percent of aviators joining the airlines come from the 2,200 regional and commuter airlines, the Federal executive president of the commercial airlines say. What gripes commuter airlines is using benefits to screeching pilots who jump to other companies at starting salaries below the $40,000 that small air companies pay. That is the case in the major-carrier pilots to quit without getting notice. Demand for pilots keeps growing. In January 1,985 aviators were hired to fly jet airliners, a record for the month. That followed a year in which 7,840 were hired, smashing the mark of 5,400 sets in 1984. To find replacements, small carriers now accept students who haven't completed college, raise age limits, sometimes to age 50 for new hires, and lower eyesight standards and flight time requirements.

That is in U.S. New & World Report, so that feeds in with what the airline captain is telling us. He goes on:

> FAA seems ineffective in enforcing safety standards as presently constituted. Even when complaints are registered directly with an FAA office, corrective action is seldom swiftly and directly applied. I believe this is primarily attributable to a

confusing and conflicting legislative mandate which charges FAA with a dual responsibility to both promote the economic interests of the airlines and to regulate them in the interests of public safety. In my view, FAA should become an agency that is concerned solely with aviation safety.

That is something that is well within the purview of this committee to look into as to whether that should be a separate function for some other agency of government.

No. 3, "My airline has had more FAA fines imposed in the last 2 years than in the preceding half century." It shows FAA is out there doing something.

> Much larger fines on other carriers have, of course, made front page news. Ironically, these fines seem to have little effect, and the carriers apparently charge them off as a cost of doing business in a deregulated environment. Until the level of personal accountability is increased and fines are imposed directly on the corporate officers who are responsible for ordering the violations of regulations, fines will do little to enhance aviation safety.

The fourth point he made is:

> Regulation must become more uniform. Though FAR's are being modified to eliminate distinctions between competing carriers of different classes, many exceptions remain. Why, for example, do carriers operating in Hawaii and Alaska not have to install weather radar? Why do carriers that operate almost entirely over the ocean not have to carry life rafts? A night ditching would almost surely result in loss of most passengers, absent some way to keep them together and out of the elements.

As I understand it, that is legal as long as you are not over 50 miles from shore, but I don't think many of us can swim 50 miles if they were out to that limit.

"Why do aircraft minimum equipment lists—"the MEL's that we already heard about at the last hearing"—ever permit the dispatch of an aircraft from a maintenance base with inoperative components that affect flight safety or seriously increase pilot work load, for example, an autopilot, automatic pressure controls, or navigation equipment. Abuse of these minimum equipment lists is widespread and needs to be addressed."

The fifth point he makes is that, "Aircraft mechanics are often not qualified to work on the planes they repair. The regulations should be amended to require initial training and periodic recurrent training for mechanics on each type aircraft they are licensed to maintain."

He goes into another short paragraph here, but I think those are some things that we need to address on this subcommittee, along with FAA manpower; other things to consider are the level of penalties that can be placed for violations; the idea of promotion as opposed to safety regulations, I think that has to be addressed, also.

Another problem we ran into is that there are a lot of publicly owned aircraft, some 5,000 of them out there owned by States, cities, and the Federal Government, that are not required to go under FAA inspection. They have to fly by the same air rules if they are actually in flight, but that is all as far as inspection of engines and air frames and things like that; they don't have to comply with the FAR's.

The ATC system workload of air controllers, that is another one to be addressed, and another one that we have had brought up a couple of times is the differences between the administration of FAR's by different FAA offices around the country, with the reputation, at least, among pilots and air carrier sponsors or air carrier owners that you can go to one part of the country and get licensed where you wouldn't have a prayer in another region of the country. So that is another area that we certainly need to address.

Let me just close with one other statement that we distributed last week to the press, some of these things that give a lot more data on deregulation and what has occurred since deregulation around the country.

I think those are worthy of reviewing, again. I won't read those off, but I hope we have some copies of those available today. Let me just say one thing that comes to mind on this whole subject from back in World War II days. There aren't many people in this room, probably, who are as old as I am, but I was in World War II.

I was a pilot in World War II, and I well remember on the bulletin boards and on the hanger walls, sometime back then there was a saying that I think is just as true today as it was then. "Flying in itself is not inherently dangerous, but it is mercilessly unforgiving of human error."

All we are trying to do here is work with FAA to cut out as much of that human error out of our system as we can. That is what these hearings are all about.

Thank you.

Chairman ROTH. Senator Gore.

OPENING STATEMENT OF SENATOR GORE

Senator GORE. Thank you very much, Mr. Chairman.

Last week, this subcommittee heard some startling and disturbing testimony. We heard that the airline involved in the Gander crash cut corners frequently. We heard that maintenance was done by mechanics who lacked the proper knowledge and maintenance was frequently postponed on many planes, including, apparently, the DC-8 involved in the Gander crash.

We heard that pilots were often forced to fly far beyond acceptable limits and that as a result, an entire crew would sometimes fall asleep with the plane on automatic pilot. It was, to say the least, extremely troubling testimony. Today, we will hear from the Federal Aviation Administration, which is charged by law with keeping the airways safe. Our natural question is: How could a marginal corner-cutting airline like Arrow be allowed to continue its service?

It appears that in the past, many violations by Arrow were allowed to languish, sometimes for a period of years. When the FAA finally got around to these cases, it simply wiped Arrow's slate clean, either because the FAA's files were empty, or because the FAA believed Arrow's new management would do the trick. Mr. Chairman, I look forward to examining today a similar situation at Continental, where the FAA apparently looked the other way, even though that airline had major violations.

It would appear, Mr. Chairman, that many of these airlines have been operating over the years under a virtual immunity from the FAA. Small wonder that Arrow operated as it did for so long, when it could expect only a slap on the wrist from the FAA.

Mr. Chairman, when this hearing is concluded, I would request that the results of a GAO report, which I formally requested along with Senator Jim Sasser immediately after the crash at Gander be included in the record of these proceedings or if not the whole report, its summary. Senator Sasser and I requested this GAO study 2 days after the crash, as did Congressman Norman Mineta, chairman of the Aviation Subcommittee on the House side.

I understand from this morning's newspapers that GAO has leaked the study, but when we get it, we will make it available to the subcommittee, and I hope that it will assist the subcommittee in its work.

In conclusion, Mr. Chairman, I want to congratulate you and my colleagues, Senator Glenn and Senator Nunn, for convening this proceeding. I look forward to the testimony this morning with great interest.

Chairman ROTH. Just let me make a comment about the GAO report. We would be happy to make that part of the record, if you want to make a summary. That can be done, but one of the things, as part of keeping down costs, we are trying to limit the number of things that we print as part of the record.

That is a request that has come, as a matter of fact, from the Rules Committee. I would be happy to make it part of the record.[1]

Senator GORE. Mr. Chairman, I will consult with you and the ranking member when we get the report, and if the summary is all that is needed for the record, that is certainly fine with me.

Chairman ROTH. Thank you.

Senator Chiles.

OPENING STATEMENT OF SENATOR CHILES

Senator CHILES. Thank you, Mr. Chairman.

I am happy to join in the cosponsorship of legislation that seeks to protect those individuals who come forward to the Federal Aviation Administration with problems that relate to airline safety.

This amendment to title IX of the FAA Authorization Act of 1958, prohibits reprisals against employees, officers, or contractors who make complaints either to the FAA, the National Transportation Safety Board, or the Congress. I certainly believe this bill will be a positive factor in getting the proper authorities notified when air traffic safety is jeopardized.

During the first day of the hearings last week, I expressed the hope that we could get a merger of the overriding questions and some overdue answers regarding air safety.

I don't think we got many answers. In fact, I believe we picked up some more questions last week. I hope the Federal Aviation Administration can provide us today with some answers. The public probably has more questions about safety than the subcommittee, particularly those who read the papers lately. And certainly, the FAA can't be held accountable for the fact that pilots asleep in the cockpit, but FAA can place reasonable restrictions on all flying hours that pilots endure.

Right now, we find a pilot may be in accordance with FAA rules and regulations will commercial flights but be required to ferry a plane for an additional 4 hours before making another flight. If you look at that commercial flight time, the situation is all right. If you look at the total flight time, it is a different story, and that story is disastrous in terms of air safety.

---

[1] The GAO report has been retained in the subcommittee files.

The testimony the subcommittee heard only increased the concerns I expressed last week regarding delayed maintenance items. I repeat that when the FAA thinks it is serious enough to cite, then it certainly ought to be serious enough to fix, but airlines often don't fix these items. They fly with them. Again, maybe we are overreacting on this. It could be that the FAA doesn't place much importance on delayed maintenance items, and maybe the subcommittee has been misled on the whole issue.

I am anxious for the FAA to tell us just how serious delays of maintenance can be, whether safety is jeopardized at all when the airlines simply fail to fix some of these items, or whether safety is only threatened a little bit.

The pilots who testified last week told the subcommittee of instances where flight attendants were so tired that they were asleep on landing, which is certainly a very critical time. In fact, because of their responsibilities, in a case of an on-the-ground incident, they should be most alert on landings. I would hope that FAA would commit themselves to a study of the schedule for flight attendants.

[At this point, Senator Gore withdrew from the hearing room.]

Senator CHILES. It may be important that they be under some kind of work restrictions with regard to the number of hours they fly. Normally, I might be reluctant to ask for this type of Government intervention, but safety has to be of paramount issue. Safety considerations should be a higher priority than the desire to increase profits or any other consideration that regulators and airline corporations face.

The American public read in the papers or hear on television or read that air traffic controllers are working more overtime than ever before and that pilots are so exhausted they fall asleep in the cockpit and small airlines try to get by on marginal maintenance to enhance their profit level; they have to ask if we have, in fact, not only deregulated airlines, but whether we also have deregulated safety.

That was never the intent of Congress. Safety is not an area where we should be willing to tolerate even the slightest slippage.

Mr. Chairman, I would ask that the remainder of my opening remarks be placed in the record, and I, again, am delighted to see you hold this hearing.

Chairman ROTH. Without objection, so ordered.

[Senator Chiles' prepared statement follows:]

PREPARED STATEMENT OF SENATOR CHILES

I am happy to join in the cosponsorship of legislation that seeks to protect those individuals who would come forward to the Federal Aviation Administration with problems which relate to airline safety. This amendment to title nine of the FAA Authorization Act of 1958 prohibits reprisals against employees, officers of contractors who make complaints either to the FAA, the National Transportation Board or the Congress.

I believe this bill will be a positive factor in getting the proper authorities notified when air safety is jeopardized.

During the first day of hearings last week, I expressed a hope that we could get a merger of the overriding questions and some over due answers regarding air safety. I don't think that we got many answers, in fact, I believe we picked up some more questions. I hope the Federal Aviation Administration can provide us with some answers.

The public probably has more questions about air safety than the subcommittee, particularly those who have read the papers lately. The FAA can't be held accountable for the fact that pilots fall asleep in the cockpit but the FAA can place reasonable restrictions on all flying hours that pilots endure. Right now, a pilot may be in accordance with FAA rules and regulations on commecial flights but be required to "ferry" a plane for additional hours before taking another commercial flight. So, if you looked at the commercial flight time, the situation is all right. But if you looked at the total flight time, it's a different story. And that story is disastrous in terms of air safety.

The testimony the subcommittee heard only increased the concerns I expressed last week regarding delayed maintenance items (DMI). I repeat, if the FAA thinks it's serious enough to cite, then it's serious enough to fix. But airlines often don't fix these items, they fly with them. Then, again, maybe we're over reacting on this. It could be that the FAA doesn't place much importance on delayed maintenance items and maybe the subcommittee has been mislead on this whole issue. I'm anxious for the FAA to tell us just how serious delays in maintenance can be and whether safety is jeopardized at all when the airlines simply fail to fix some of these items, or whether safety is only "threatened" a little bit.

The pilots who testified last week told the subcommittee of instances where the flight attendants were so tired that they were asleep on landings—which is a very crucial time. In fact, because of their responsibilities in case of an on-the-ground incident, they should be most alert on landings. I would hope that the FAA would commit themselves to a study of the schedules for flight attendants, for it may be important that they also be under some kind of work restrictions in regards to the number of hours they fly.

Normally, I might be reluctant to ask for this type of Government intervention, but air safety must be the paramount issue. Safety considerations should supersede philosophy, desire to increase profits and any other consideration that regulations and air line corporations face.

When the American public read in the papers or hear on television that air traffic controllers are working more overtime than ever before, that pilots are so exhausted that they fall asleep in the cockpit, that small airlines try to get by on marginal maintenance to enhance their profit level, they have to ask if we have in fact not only deregulated airlines but whether we've also deregulated safety. That was never the intent of Congress. Safety is not an area where we should be willing to tolerate even the slightest slippage.

The disaster at Gunter Air Force Base in Newfoundland, Canada was a terrible tragedy for not only the people directly involved but for the Nation. Those 256 persons on board the Arrow Airlines flight put their faith and trust in a plane that was FAA approved. We don't know why that plane went down. We, in fact, may never really know why that flight went down.

What is absolutely important is that passengers feel confident that FAA approval is equivalent to safety. When an individual drives a car, he or she feels in control of that vehicle. We are all able to tell stories of how we averted accidents by being a good driver. A passenger on an aircraft has relinquished all control and must put their faith in someone else. The someone else is the aircraft crew, the pilot, the flight engineer, the co-pilot, the flight attendants, etc.

So passengers believe the crew is OK because that FAA says so. Passengers believe the plane is OK because the FAA says so.

Passengers have no way of knowing if the delayed maintenance items on an aircraft jeopardizes safety, but the FAA should!

Passengers have no way of knowing if a crew has been in the air for 18 of the past 24 hours, but the FAA should!

Finally, Mr. Chairman, we've heard allegations that FAA inspectors in the Miami region are very lax and not very tough on inspections of aircraft. I want Floridians to feel just as safe in a plane originating from Miami as one which originates from any other section of the country. I hope the FAA will address that charge.

Thank you, Mr. Chairman, that concludes my statement.

Chairman **Roth**. I would also like to express my appreciation for your cosponsoring my proposal to protect whistle-blowers. I happen to think it is critically important that members of the industry feel free to contact the FAA without recrimination.

Senator **Chiles**. I agree with you.

Chairman **Roth**. For that reason, I think this can be a very helpful piece of legislation. I do appreciate your support.

[At this point, Senator Chiles withdrew from the hearing room.]

Chairman **Roth**. At this time, we would like to call forward a panel of retired FAA employees. Appearing on the panel are two retired Federal Aviation Administration inspectors, Mr. Harry Langdon and Mr. James Alley. Mr. Langdon retired from the FAA in January 1985 after more than 24 years of service, the last 17½ years of which he was an air carrier operations inspector in the San Francisco District Office.

Mr. Alley retired from the FAA in January of this year from the position of air carrier operations inspector, after a career with that agency of over 25 years, the majority of which were also in the San Francisco District Office.

Mr. Langdon and Mr. Alley served as part of a team that inspected Continental Airlines in 1984. They will testify about the team's findings and the FAA's subsequent response to those findings.

Appearing with Mr. Langdon and Mr. Alley is Mr. Melvin Derry, who had a long career with the FAA, including several supervisory positions in the flight standards area before retiring in 1985.

In 1984, Mr. Derry, at the invitation of the FAA, participated as part of a task force of retired FAA inspectors, which evaluated the inspection reports of the National Aviation Transportation inspection 1 and 2, commonly called NATI 1 and 2. Mr. Derry will testify today concerning the conclusions reached by that task force.

Gentlemen, I welcome each and every one of you here. Under the rules of our subcommittee, it is necessary for all witnesses to be sworn. So will you please rise and raise your right hands?

Do you swear the testimony you will give before this subcommittee will be the truth, the whole truth and nothing but the truth, so help you God?

Mr. **Langdon**. I do.

Mr. **Alley**. I do.

Mr. **Derry**. I do.

TESTIMONY OF JAMES E. ALLEY, JR., RETIRED FAA INSPECTOR AND HARRY A. LANGDON, RETIRED FAA INSPECTOR

Chairman **Roth**. Thank you, and please be seated.

Mr. Langdon, do you want to begin with your testimony?

Mr. **Langdon**. Mr. Chairman, we have a joint statement which we would like to submit which I believe Mr. Alley will read, and then we have our separate statements, if that is all right.

[At this point, Senator Gore entered the hearing room.]

Chairman **Roth**. The statement wil be included in the record as if read, if there is no objection. I guess it would be appropriate to let Mr. Alley start. Is that the way you want to proceed?

Mr. **Langdon**. That would seem to be a good way.

Chairman **Roth**. Mr. Alley, would you please proceed?

Mr. **Alley**. First, I would like to thank you for the opportunity of participating in this hearing and hopefully, all of our joint participation will help further the FAA's cause, which is dedicated to air safety. Just a little bit of background as far as experience is concerned to hopefully lend a little credibility to what I have to say today.

My name is James E. Alley, Jr. and I reside in Burlingame, CA, which is a suburb of San Francisco.

I retired from the Federal Aviation Administration on January 3, 1986, several months ago. I served with the FAA's flight standards division as an air carrier operations inspector for approximately 25½ years. The majority of my duty was spent in the San Francisco Air Carrier District Office.

Prior to my career with the FAA, I spent 16 years with the Navy. Thirteen years on active duty were spent as a naval aviator flying Navy transport aircraft worldwide. I also spent an additional 10 years in the Naval Reserve, where I continued to fly transport-type aircraft.

I have held an FAA airline transport pilot rating since 1952. I have FAA aircraft type ratings in the DC-4, DC-6, DC-7, and Boeing 707, 720, 727, and 747 type aircraft, and I have something over 10,000 hours of pilot time.

Both Mr. Langdon and myself have prepared separate statements as well as joint statements. The separate statements were slanted primarily toward the Continental investigation. Since both of the separate statements in this area covered essentially the same ground, I have been asked to read the joint statement which as recently being employed by the FAA and as having observed the FAA in action for a number of years, we feel that there are areas which need to be either improved upon or at least looked into in some manner in the interest of furthering air safety.

The joint statement by Mr. Langdon and myself was the result of somewhat of a brainstorming get-together. As such, any questions that you might have after I completed it I will try to answer as best I can. A lot of this, I must admit, rests from personal opinion. We do have and have backed much of this up by example, but again, much of this is personal opinion.

So with that, I will read this statement. This is intended to give, from our perspective, how we feel the FAA position is today and areas which conceivably could be either improved upon or investigated for possible improvement.

[At this point, Senator Gore withdrew from the hearing room.]

Mr. Alley. The Federal Aviation Administration is mandated by Congress to regulate the Nation's aviation industry. It is charged with the responsibility of ensuring the public that the aviation industry operates using the highest possible degree of safety standards. Our positions were air carrier operations with the FAA Flight Standards Division. Our primary responsibilities were twofold.

First, our duties included the certification of new air carriers and their respective operations and personnel. Second, as operations inspectors, we were responsible for conducting continuous surveillance of air carrier operations and personnel to ensure proficiency, qualification and safety.

The operational certification of air carriers and their personnel demands an enormous portion of the available time and resources of the Flight Standards Division. The certification of new air carriers, air carrier entrants and its personnel includes the review and approval of company manuals, the evaluation of personnel training, the approval of operations specifications, aircraft minimum equipment lists, and conducting proving flights. Certification is of the utmost importance, because it determines the competency of the new carrier to operate safely. Because of the rapid growth and change of the aviation industry, particularly since deregulation some years ago, the FAA has placed a priority on the certification of new entants and expanding airlines.

It was difficult to conduct comprehensive certifications simply because of the increase in the number of requests and the continuous loss of well-qualified and experienced FAA inspectors.

During surveillance and some certifications, inspectors are frequently confronted with resistance from FAA principal operations inspectors assigned to the air carrier under inspection. The principal operations inspector often exhibits favoritism on behalf of their respective air carrier and are protective of criticism of their client. There was an instance invoving an airline wherein its crews repeatedly failed an aircraft emergency evacuation demonstration. Rather than be graded unsatisfactory, the principal operations inspector allowed the crew to repeat the demonstration approximately 10 times until it was considered by the principal operations inspector to have been passed satisfactorily.

There was a lack of inspectors in the San Francisco Flight Standards district office to effectively handle our own area of responsibility. However, because of severe shortages of inspectors in other Flight Standards offices, the San Francisco inspectors were routinely required to travel to these other districts and regions to certificate airlines and their crews. This, naturally, impeded the eficiency of the San Francisco district office. In order to accommodate the matter of undermanned inspection staffs, the FAA instituted an Examiner Check Airman Program which designates specific company pilots and flight engineers to serve as authorized FA designees to certificate and license pilots and flight engineers.

[At this point, Senator Gore entered the hearing room.]

Mr. ALLEY. This is equivalent to putting a fox in the henhouse. The failure rate of crews receiving certification and/or proficiency tests administered by their colleagues has been substantially lower than when tests were conducted or monitored by FAA inspectors. For instance, in 1984, Continental Airlines administered approximately 600 proficiency checks of its flight personnel without a single failure being recorded. This record is highly unusual and unlikely.

The FAA does not apply consistent or uniform certification standards nationwide. FAA policy applications and interpretations of regulations vary from region to region and from district to district. Each region appears to function as if it were a separate FAA. There are instances where pending new air carriers will choose to initiate certificate action in certain districts or regions because they tend to be more lenient with the application of certification standards. This is done irrespective of the geographical area in which the carrier's main base of operation will be. Carriers who certificate in one region and operate mostly in another region are often protected by their close relationships with their respective principal operations inspectors who may tend to insulate them from criticisms or violations received during various inspections conducted by inspectors based in other regions.

Airline deregulation expansion has created a major additional workload for inspectors, thereby precluding them from giving adequate attention to certification details. The inability to do a comprehensie certification has had an impact on the eventual compliance of many new, small air carriers.

The second most important mission of the Flight Standards Division is the surveillance of air carrier operations and their crews to ensure that regulations continue to be met and safety maintained. Surveillance capabilities of Flight Standards inspectors has drastically decreased due to the substantial increase in workload. While there has been a tremendous growth in the airline-related workload, there have been on commensurate growth in the FAA workforce. Airline and flightcrew certification receive the highest FAA priority. Because of the lack of experienced inspectors, this detracts seriously from the ability to perform routine surveillance. Insufficient FAA presence with respect to its surveillance responsibilities often results in some air carriers taking advantage of the situation and allowing their operations to deviate to a marginally safe condition. There have been times when airlines have premitted their aircraft minimum equipment lists to exceed normally accepted practices with respect to the member of maintenance items deferred and the length of time these items were deferred unitl they were repaired.

In recent years, the FAA initiated a geographical area concept in an effort to effectively utilize its personnel for air carrier surveillance. The geographical area concept has merits. However, its implementation by the FAA is somewhat inefficient. The geographical area concept is intended to be a system which allows inspectors to conduct surveillance, file reports and cite violations which occur within their specific venue.

Unfortunately, there is inefficient communication between regions. For example, there have been instances when specific pilots or crews have been evaluated several times in different regions because there was no efficient system which kept inspectors appraised of the status of inspections.

Conversely, there have been flightcrews and/or pilots who went unevaluated for extended periods of time. This lack of communication lends itself to an inefficient use of an already depleted workforce. The geographical area concept also creates a situation where inspection priority often seems focused by the FAA on those air carriers who are headquartered in their district or region rather than focusing on air carriers that merely operate through another's area.

The former system worthiness analysis program concept is a more effective surveillance mechanism than what is presently employed. A SWAP team, which stands for System Worthiness Analysis Program, a SWAP team if properly directed and motivated, can conduct very effective inspections in relatively short periods of time. SWAP teams are capable of conducting detailed audit-type inspections of entire operations by personnel who specialize in this type of inspection. Such an inspection is more thorough and timely.

It is advantageous to industry and the FAA and a means toward standardization.

The advent of deregulation brought with it a tremendous change in the airline industry. This change consists of pure numbers such as additional air carriers, equipment, crews, et cetera. Moreover, aviation technology has become more advanced and complex. It is easy to lose proficiency or become unfamiliar with aviation equipment if one is not exposed to it on a continuing basis. The ability to remain proficient in more than one aircraft is not likely unless inspectors receive continuous, recurrent, hands-on training. Familiarity with a certain aircraft can wane if there is a lack of frequent exposure. Consequently, it is difficult to conduct surveillance and effectively determine the proficiency of a pilot or flight crew unless the inspector is, himself, reasonably proficient and remains thoroughly familiar with all aircraft characteristics.

It is a false economy to cross-qualify inspectors when it is not possible for them to stay qualified. It is better to be proficient in one aircraft rather than to be partially proficient in more than one. For these reasons, we believe that an urgent need remains for inspectors to specialize in the operations of specific aircraft. However, with the current resources problems, there are insufficient qualified inspectors to effectively meet this requirement.

An additional concern is the recent reorganization by the FAA which merges General Aviation and Air Carrier operations and personnel. Basic General Aviation and Air Carrier requirements are as different as night and day. Air Carrier inspectors and General Aviation inspectors are not competent to certificate or conduct surveillance on any operation other than that which they have been specifically trained and exposed. It is poor judgment to take an inspector with exclusively light aircraft experience, put him through a 90-day training course in airline operations, and expect him to perform effectively and knowledgeably as an air carrier inspector. It is inconceivable to believe that an inspector, whose prior experience was only with light aircraft, to have the ability to evaluate the operation of such carriers as United, American, and TWA.

The enforcement capability of the FAA has been weakened due to increased workloads and a decrease in the number of inspector personnel. The surveillance necessary to detect violations is limited. There are many violations that occur from day to day that the FAA does not detect. Discovering, documenting and reporting violations is a time-consuming process. Inspectors frequently meet resistance from air carriers' principal operations inspectors. The company principal operations inspectors, at times, oppose the reporting of clearcut violations. They may tend to favor the interests of the carrier rather than that of the FAA or the public.

FAA management, however, encouraged citing violations, particularly against the small airlines. There were times when management pushed for violations when, from the inspector's perspective and judgment, there were no real grounds for a violation. As inspectors, it became increasingly more discouraging to report violations because of what appeared to be a double standard. The FAA is more inclined to actively control and discipline small airlines than the larger carriers.

FAA management has a tendency to second-guess inspectors findings and thereby change the content of a report. Violations get bottled up during review by the regional FAA office and/or during legal counsel review. Recommended sanctions were generally abated substantially upon final dispositions of a violation case.

Moreover, sanctions were generally inadequate. Fines were looked upon by the air carrier as a cost of doing business. As an example, it is somethimes more economical for an airline to use bogus parts and eventually pay a fine than to remove the aircraft from operation for appropriate maintenance. Also, there is no standardized enforcement nationwide. You may have five similar incidents or violations in five different regions and five varying sanctions. The severity or leniency in sanctions can have a direct effect on the degree of safety and regulatory compliance an airline observes.

Enforcement and safety could be greatly enhanced with the proper use of the Air Safety Reporting System Program headed by NASA. This system suffers in that its appropriations were reduced, resulting in a relatively ineffective system in place to analyze the reports and evaluate their significance. Therefore, a very reduced amount of valuable feedback is disseminated to the airlines or FAA.

[At this point, Senator Gore withdrew from the hearing room.]

Mr. **Alley**. Since deregulation, more and more financially unsound companies are being certificated as airlines. There was a period when proof of financial capability and responsibility was an integral and important part of the initial certification process of new entrants. When this requirement was removed from the FAA, the door was opened to allow companies with insufficient operating capital to enter the airline business.

This resulted, many times, in a revolving door syndrome. New entrants who demand a great deal of FAA manpower for certification purposes quite often cease doing business only weeks later due to financial difficulties. These new unstable entrants require excessive attention of FAA personnel who would otherwise be conducting valuable surveillance of existing airlines.

The FAA, in our opinion, is often reluctant to impose safety measures or sanctions because of the resultant economic impact on the carriers. We do not subscribe to the idea that rules or penalties should never consider costs. However, the FAA tends to err on the side of economics. This mindset might be, in part, due to the FAA Act of 1958 which mandated the FAA to foster as well as regulate civil aviation. Free enterprise is a necessary and desirable concept, but it is not a reason to potentially endanger human lives or property.

That ends our joint statement.

Chairman **Roth**. As I understand, you have separate statements, as well?

Mr. **Langdon**. Yes.

Chairman **Roth**. In the interest of time, I wonder if you could summarize those statements so that there is adequate time for questioning.

Mr. **Langdon**. I will address the Continental findings.

Chairman **Roth**. Yes; we want to give you full opportunity.

Senator NUNN. Mr. Chairman, I think Mr. Alley was going to read the joint statement and have his own statement put in the record. Mr. Langdon was going to cover the Continental report for both of them.

Chairman ROTH. Fine, we will proceed, then.

Mr. LANGDON. Mr. Chairman, my name is Harry Langdon, and I live in San Mateo, CA. I learned to fly, started to fly in 1937 in England. I served with the RAF during World War II at the coastal and transport command. After that I flew for British Airways, KLM. I emigrated to the United States, and I flew for several air-cargo and nonscheduled airlines. I joined the FAA in 1960 in flight inspection, which involved flying FAA aircraft and airborn calibration of NAVAID's and came to San Francisco, and for the last 17½ years of my service, served as an air carrier inspector in that office.

My job responsibilities included the certification of flight crews, approval and surveillance of company check airmen and surveillance of various aspects of airline operations such as route inspection, line checks, proficiency checks, and so forth.

I have a total of about 12,000 hours of pilot time and am qualified on the Lockheed Electra, CL44, DC8 BAC 111, and several other aircraft.

On or about February 3, 1984, the Western Pacific region organized an inspection of Continental Airlines. This inspection was authorized by Mr. Clyde DeHart, the then manager, Flight Standards Division, AWP 200. I was appointed as leader of the operations team. First other inspectors served on the team with me. The team coordinator, who provided us with guidance, supervision, and administrative support, was Mr. William Whythicombe, a member of Mr. DeHart's staff. The inspection addressed a wide range of air carrier operations.

I will submit, for the hearing record, a list of areas that were subject to our inspection. The top left-hand corner of that is annotated as exhibit A.[1]

Chairman ROTH. Without objection, so ordered.

Mr. LANGDON. The inspection commenced approximately February 6. Several discrepancies became evident fairly early in the inspection. The most blatant discrepancy was the use by Continental of many check pilots who had not had the required Federal Aviation Administration training required by the FAR's, but more importantly, many had not gone through the proper FAA designation and authorization procedures.

At this time, I would like, with your permission, to submit an exhibit which describes Continental's policies regarding their check airman, which is annotated as exhibit B in the top left-hand corner.[2]

Chairman ROTH. Without objection.

Mr. LANGDON. The requirements are that check airman should be FAA approved while providing initial operations experience, which I will refer to IOE from now on, on newly upgraded captains in the FAR's and is made applicable to FAA by policy directives, the air carrier inspector's handbook and various other FAA documents. IOE consists of 25 hours of regular line flying by a newly appointed captain under the supervision of a properly trained and FAA-approved check airman.

---

[1] The information referred to was marked exhibit No. 12 and may be found on p. 357.

[2] The information referred to was marked exhibit No. 13 and may be found on p. 362.

The IOE is the last stage of the pilot training qualification process. From that point on, pilot flies the line on his own.

New captains were being appointed rather rapidly, and many were flying with newly hired copilots and newly hired flight engineers. The newness of the crews was a very serious factor to us. The check airman program, particularly because of Continental's then ongoing expansion with new personnel, took on a far greater significance than ever. We found that not only were the requirements for the training and proper FAA authorization procedures being flouted by Continental and the local FAA office, but the company was being supported in their policies by the local FAA Flight Standards District Office.

Moreover, I was told by Continental management personnel that this practice had been going on for sometime. This was an altogether astonishing and alarming situation.

We immediately brought the problem of the attention of the Continental principal operations inspector in Los Angeles. Instead of initiating immediate action which we recommended, he took the carrier, he took Continential's side and secured authorization from FAA headquarters in Washington to permit Continental to continue these illegal practices for another 30 days.

The local FAA office was condoning an ongoing series of clear-cut violations by the numerous pilots. The arbitrary granting of a 30-day extension by headquarters personnel made the FAA, in my opinion, an accessory to the violations. The matter is outlined in detail in the original version of our check airman finding No. 7.

After much discussion among the team members, we concluded that the situation should not be permitted to continue for even 1 more day. On March 6, we presented the Los Angeles Flight District, Flight Standards District Office with an advance draft of our check airman findings No. 7. We requested an immediate cessation of the illegal use of check airmen. However, the recommendation was rejected, apparently on the grounds that Washington headquarters personnel had already authorized a 30-day extension. In other words, the FAA had apparently granted Continental an exemption from important segments of the FAR's without going through the exemption process.

We continued our inspections, and upon completion on March 16, a meeting was held with the FAA personnel and senior Continental management personnel. The company was debriefed on our entire inspection, including the check airman issue. I was so concerned and suspicious of the FAA's inaction regarding the check airman violations that, at the time our report was finalized, I took the precaution of making and keeping a copy of our entire original report. Until that time, we had been supervised by Mr. Whythicombe during every step of the inspection and during the preparation and writing of the report.

Although the check airman issue was still left unresolved, the team's findings, supported documentation and writeups, were not questioned during the time we were conducting the inspection and concluding our report, although Mr. Whythicombe and Mr. DeHart were kept fully appraised at all times of our findings as the tally of alleged violations was mounting.

On April 22, 1984, about 1 month after the debriefing of Continental, the team was recovened in Los Angeles by Mr. DeHart. Mr. DeHart informed the team that Mr. McClure, the Western Pacific Regional Director, wanted us to remove some of the rhetoric from the report.

Mr. Whythicombe was now "on the opposite side of the table." Mr. Whythicombe directed the team to reword the writeups which he had previously approved. However, with respect to the check airman findings, the changes he required us to make were, in my opinion, of a substantive nature. I refused to agree to any substantive changes in that finding. The other members of the inspection team were unanimous in agreement that the issue was critical, amply documented, and supported by the regulations and FAA directives, et cetera.

When Mr. Whythicombe insisted that I make the changes, I declined any further involvement in the matter and left the meeting.

I wish to submit for the record a copy of the original version of our check airman finding and the altered version, which is annotated, with your permission, exhibit B-1.[1]

Chairman ROTH. Without objection, so ordered.

Mr. LANGDON. Approximately 1 year later, the FAA ordered another special team to conduct an inspection of Continental Airlines. The inspection was unprecedented in that that team included four FAA attorneys. Also unprecedented was the procedure of conducting a press conference to publicize the findings of the second team, and the fact that the operations team leader, in that case, was consulted on proposed corrective actions by Continental.

Contrary to what Mr. Broderick had informed me in his letter of February 8, in which he agreed with our interpretation regarding training and the FAA approval for FAA checks regarding initial operation experience, IOE, Mr. Ayton, the subsequent inspection team leader, stated at a press conference that Continental Airline pilots had now received the training and FAA approvals, even though they "did not need it." Mr. McClure, at that same press conference, stated that the changes to the original report were made because it contained statements that were not "factual" and again, "When FAA asked Harry Langdon to remove statements that were not factual, Harry objected to that."

I want to stress that questions of factuality were never raised to me or any other member of our team. The factuality of all substantive issues was, in the opinion of all team members, well substantiated by ample documentation supplied by the team but much of it removed from the rewritten version.

Furthermore, I also want to add to the regard that, had at any time questions of factuality been raised, we would have, of course, agreed to make any necessary changes.

---

[1] The information referred to was marked exhibit No. 14 and may be found on p. 364.

I also want to go on record that I really resent the implications, any implications to the contrary in Mr. McClure's statement to the press.

The Air Lines Pilots Association did not attend that press conference. ALPA representatives were apparently invited to a special meeting with the inspection team immediately after the press conference, so I was later informed. I was also told that during this meeting ALPA was informed that the second team had been instructed not to look at the issue of pilot training. Soon thereafter, ALPA pressured the FAA and apparently ultimately persuaded the FAA to take enforcement action, which resulted in fines of about $300,000.

I believe the FAA assessed something like $600,000 worth of fines against Alaska Airlines for a far lesser number of similar violations.

I should also add that in our original report, we had recommended some 20 violations for what we saw as the infractions of some 31 regulations; all of these were removed from the Western/Pacific version of our report.

I will add that these violations which we recommended were in accordance with the written instructions that we had received which were to the effect that if we encountered any deviation or any violations, we were to recommend violation action as a matter of routine in our report.

In conclusion, I wish to state that where we were accused of including hearsay in our report, that is standard procedure, because statements made by airline personnel give inspectors a clear indiction of management's understanding of the regulations, responsibility for which rests directly with them, according to the FAA Act of 1958. Furthermore, our instructions were specifically, "Report the results of interviews with the operator personnel."

I wish to include, with your permission, a copy of those written instructions.

Chairman **Roth**. Without objection, so ordered.

Mr. **Langdon**. That is annotated as exhibit E.

Mr. Chairman, I apparently overlooked some other submittals that I wanted to make, again, with your permission. A letter, a copy of my letter to Secretary Dole in which I took exception to these changes, exhibit C; Mr. Broderick's response, exhibit D; and a letter that I wrote in reply to Mr. Broderick, exhibit E.[1]

Contrary to Mr. Broderick's claims, I maintain that we adhered strictly to the instructions in our inspection package and all substantive matters reported by us and that our findings, discussions and recommendations were also supported right down the line by FAA regulations, the FAA air carriers inspectors handbook as it exists at that time, and that our report was made, and numerous other FAA directives, orders and notices, all of which were included as exhibits in our original version and, in my opinion, improperly removed from the altered version. I challenge anybody to show me otherwise.

---

[1] The information referred to was marked exhibits No. 15, 16, and 17 and will be found on pp. 368, 371, 374, respectively.

In closing, I would like to include for the record a copy of my reply to Mr. Broderick, which I already have done. That was exhibit E. That is the conclusion of my statement.

Chairman ROTH. Thank you, Mr. Langdon.

I think rather than proceed with the testimony of Mr. Derry, we will go ahead and ask questions of you gentleman. Let me ask you this: Why would Continental have been a candidate for preferential treatment from FAA? Either gentleman may feel free to answer this.

Mr. LANGDON. I don't know, sir.

Chairman ROTH. In your written statement, you attach a letter from Mr. Broderick of the FAA that said by March 25th, 1984, when your report was filed, that Continental had corrected all areas of concern. Is that true?

Mr. LANGDON. If you will just give me a moment to refer to my notes, I will respond to that.

Would you mind repeating the question, please, Senator?

Chairman ROTH. Yes. In your written statement, you attached a letter from Mr. Broderick of the FAA that said by March 25th, 1984, when your report was filed, that Continental had correced all areas of concern. Is that true?

Mr. LANGDON. No, sir; it is not.

Chairman ROTH. What areas were still uncorrected; do you recall?

Mr. LANGDON. Well, they had permitted the check airman situation to continue, and I later learned that their fix of the check airman situation, as about a year later, was something of a joke. They apparently had allowed many of these check airmen for whom they were unable to substantiate records of having received proper training, or FAA authorization to certify themselves.

Chairman ROTH. Would you explain, again, what a check airman is?

Mr. LANGDON. OK. That is—a company check airman is a company pilot who conducts periodic evaluations of flight crews, of cockpit crews, of their proficiency in flying the airplane and the way they conduct line operations.

The procedure is for the company to put up a prospective check airman to the FAA for approval, and there is quite an elablorate procedure that they go through, which they have to go through before they are approved, which involves FAA observation and a recommendation by the inspector who observes them.

Subsequently, the principal operations inspector, then, writes a letter to the company if the recommendation was favorable from the inspector, authorizing that check airman to conduct certain types of checks in certain types of airplanes.

This procedure was simply being completely circumvented by Continental and with the approval of the FAA.

Chairman ROTH. Mr. Alley, I would like to ask one question from your joint testimony. If I understand you correctly, one of your concerns is the lack of adequate personnel in FAA. Is that correct?

Mr. ALLEY. That's correct.

Chairman ROTH. Second, is a question dealing at least with some personal bias in favor of the client. This really concerns me, because if I understand what you ar saying, it is that a major problem in this whole question of safety is that there begins to be built up, within a—I don't recall the official name—the POI?

Mr. **ALLEY**. The principal operations inspector or principal maintenance inspector.

Chairman **ROTH**. They build what I guess you would call a cozy relation with the airlines that they are responsible for.

How do you take care of that problem?

Mr. **ALLEY**. First of all, the principal operations and principal maintenance, principal electronics inspectors are the liaison, if you will, between the FAA and the carrier who they are assigned to oversee.

I think, human nature being what it is, after you have been in one of these positions for some period of time, and possibly shepherding a carrier kind of under your wing, you start looking at it in terms of "this is my carrier" not in a possessive means, but in one that you have devoted a great deal of time to, and you are interested in their particular interests, and there's tendency, if you're not careful, to allow these interests to be manifest in such a manner that it has to be construed that you are favoring that particular operator by certain favored treatment. You might enter into agreements, with the carrier as far as certain procedures are concerned, possibly some agreements that may, in effect, have some economic bearing on the carrier. But favored treatment would be primarily the thing that I'm alluding to.

Chairman **ROTH**. Should there be some question of rotation, either let a particular inspector only be responsible for an airline for a particular number of years or maybe rotate between regions? Would that help the situation, in your opinion?

Mr. **ALLEY**. That might help the situation although it is rather logistically difficult to do. There have been some instances where an inspector has been just the other way around; he has held a carrier quite rigidly to what he deems to be appropriate as far as the Federal aviation regulations are concerned, and the carrier has elected to move their operating certificate to a different region for what gives the appearance of being more favorable treatment.

I would say that possibly a given period of 2 or 3 years as a principal inspector assigned to a specific carrier would be my recommendation—particularly on the larger carriers.

Chairman **ROTH**. I am going to limit each of us to 10 minutes. My time is up.

Senator Nunn.

Senator **NUNN**. Could you give us a little more detail, either one of you, about the findings you made and what was actually wrong with Continental? I have got a summary here of some of the findings, but could you just tell us in your own words what various breaches you were cognizant of as a result of the study?

Mr. **LANGDON**. Yes, sir. Let me begin by saying first of all that at our work level, with the people that we dealt with at Continental, we encountered just absolutely first-class cooperation from those people and, apparently, a genuine concern to do things right. We were told, "Tell us what's wrong and we'll fix it."

The main areas of concern where we found problems were in the training program, where we had 25 adverse findings, which, in our opinion, involved approximately 10 violations; in the check airman program, we found a total of seven adverse findings; and I forget how many violations were involved there. Consequently, it was our feeling that in those two areas, at that time, the company did not seem to us to meet original certification standards.

In other words, if they had been a new entrant coming to us for certification with the check airman program and the training programs in the condition that they were in at that time, they would not have been certificated.

Senator NUNN. Did you find anything relating to weather?

Mr. LANGDON. Yes; there were findings in relation to weather.

Senator NUNN. Tell us about that.

Mr. LANGDON. It was a long time ago. May I refer to my copy here?

Senator NUNN. Yes.

Mr. LANGDON. In general, I seem to recall that in the Pacific operation, this was a finding by Mr. Molesworth. In the Pacific operation, there was a very large band of latitude and longitude involving hundreds of miles within which they were not receiving weather reports. This was in their operations to Australia and these weather reports, they were dispatching flights entering these areas without updated weather. It was merely a question of making a contract with an appropriate company to provide them with that information.

Senator NUNN. The information was available, they just had not done it?

Mr. LANGDON. They just hadn't done it, yes.

Senator NUNN. So they were flying in areas where they had no notice of thunderstorms or air turbulence?

Mr. LANGDON. That's right.

Senator NUNN. Or wind shear, if such a thing is predictable. I am not sure it is.

Mr. LANGDON. There was an incident Mr. Molesworth also reported on one of his route inspections on a flight between Honolulu and the west coast where they were right behind—I think it was a Western Airlines airplane which received information from its dispatch about turbulence further on down the route, but this information wasn't available to Continental except by coincidence of them having—listening to the same frequency.

[At this point, Chairman Roth withdrew from the hearing room.]

Senator NUNN. Are these in the nature of technical violations, or are these violations that truly do imperil the safety of people traveling?

Mr. LANGDON. I think, in my opinion, Senator, those are substantive violations. They have a great potential for harm, as you know, I am sure. There have been several instances of airliners flying into unexpected turbulence, resulting in injuries to passengers and crews and perhaps even damage to the airplane in some cases.

Senator NUNN. How about the training? Was that of a technical nature, the lack of training that you cited?

Mr. LANGDON. No, sir.

Senator NUNN. Was this lack of training of just the people who checked others or was this lack of training of pilots and copilots?

[At this point, Chairman Roth entered the hearing room.]

Mr. LANGDON. This was inadequacies in the training program, which I could best summarize as, first of all, the hours of training that an airline is supposed to give is spelled out in the regulations. Exceptions for this, reductions in training can be made on the basis of FAA approval.

Senator NUNN. Training of who, now?

Mr. LANGDON. Flight crews. Flight crews, including flight attendants.

Senator NUNN. Does that include pilots?

Mr. LANGDON. Pilots, flight engineers, copilots, and flight attendants, there was evidence that we saw that they were utilizing reduced hours of training. They were unable to produce the FAA authorizations authorizing those reductions.

They were apparently not even adhering to the reduced hours, and they were omitting many important subjects. This is a general summation.

Senator NUNN. You say that the people that you worked with at the working level were very cooperative? Do these people not know that they were making these errors and omissions?

Mr. LANGDON. Some did and some didn't, but they were very open about it.

Senator NUNN. Did anything happen as a result of your report? Did the FAA change your report and dilute it?

Mr. LANGDON. It was substantially diluted, yes, sir.

Senator NUNN. Your testimony was that even after it was diluted, though, it stated, as you read your testimony—I don't think you gave this orally—it stayed locked up in a safe for a long time?

Mr. LANGDON. Well, for, I believe, something like 6 months. I know that months after I had completed my inspection or our inspection, I was receiving phone calls in the San Francisco office from various people in the training department asking, you know: If we do so and so, will that be OK?

Senator NUNN. Training department of what?

Mr. LANGDON. Of Continental Airlines.

Senator NUNN. So they had not received the report?

Mr. LANGDON. No, and I had to refer—I was out of the loop at that time, and I referred them back to the principal operations inspector. It was his responsibility.

Senator NUNN. You mean the report was not only diluted and watered down——

Mr. LANGDON. It was held back.

Senator NUNN [continuing]. But it was held back. So the very people who would make the corrections did not receive the report.

Mr. LANGDON. Right.

Senator NUNN. Do you think Continental would have made the correction had the report been received by them, or at least that was the attitude?

Mr. LANGDON. Well, certainly, at our work level, I think we encountered a great inclination to get things straightened out as quickly as possible.

But it seemed to be stopped at a higher level.

Senator NUNN. Mr. Alley, last week we heard testimony on the problem of allowing excessive deferred maintenance items on commercial aircraft. I understand that you have had some en route inspection reports dealing with that issue. Would you explain the nature of these reports and the findings?

Mr. ALLEY. The purpose of en route inspections is not only to observe the proficiency of a flight crew, but also anything that has any bearing on the safety of operations dealing with the flight, both the preflight, the depature, the en route function, the descent and landing and various other phases of it, and it is used as a tool for evaluating the effectiveness of an air carrier's safety program and their training program. Through en route inspectors we try to observe each airline captain once a year if at all possible.

We are not able to do this in all cases, however that is our goal. Now, as far as this particular en route inspection, one of the items that is called for our observing deals with the aircraft logbook.

This aircraft logbook is used to log any maintenance items, primarily, that need correction. From my standpoint, the aircraft logbook is a reflection of the carrier's maintenance capability by virtue of the number and type of items which were entered in it as deferred maintenance items, items of maintenance which, for whatever reason, could not be properly fixed at a given location and were subsequently deferred until untimately, these items could be effectively completed.

The problem that, on this particular flight—that I have reference to——

Senator NUNN. Which do you have reference to? Do you have a report here——

Mr. ALLEY. Yes; I do.

Senator NUNN [continuing]. That you are referring to? Has this been identified for the record?

Mr. ALLEY. There are two reports. They are both dealing with Pan American Airways. The first one was a Boeing 747 flight from Tokyo Narita Airport to San Francisco on July 24, 1983.[1] The other was a similar Boeing 747 flight with Pan American Airways from Narita, Japan, to Honolulu on July 29—I think that is the 20.[2] I can't read my copy here—in 1984.

Senator NUNN. Let me just move along briefly here. Can we put these in the record, Mr. Chairman?

Chairman ROTH. Without objection.

Senator NUNN. Did you find numerous deferred maintenance items on these two reports?

Mr. ALLEY. That's correct. When a carrier, any carrier, finds itself in any type of adverse financial conditions which might cause them to conserve their finances, it seems as though the area of aircraft maintenance, maintenance spare parts, the increase in the use of the aircraft minimum equipment list, the deferred maintenance items, are significant examples by which you gauge the financial condition of a carrier.

In this event, with Pan American's aircraft logbook system, they divide their deferred maintenance items into three categories. They have what is termed the "operational" category, which is primarily major items, which conceivably could have a bearing on the safety of the flight. The second category deals with "nonoperational" items. Again, this concerns the basic aircraft itself. This category does not deal with any of the cabin-related items; and finally, they do have a logbook category dealing specifically with "cabin" items.

---

[1] The report was marked exhibit No. 18 and may be found on p. 376.

[2] The report was marked exhibit No. 19 and may be found on p. 378.

Senator NUNN. How many items were there in each?

Mr. ALLEY. On the first flight, there were 37 deferred operational items which were significant from an aircraft maintenance standpoint. There were 24 deferred nonoperational items. On this particular report, I didn't make notice of how many cabin items there were.

I would like to mention that on this particular flight after arriving at San Francisco on a Sunday morning, I called our office manager and advised him of the circumstances and that I felt that a maintenance inspector should come and take a look at this aircraft to see if, in his opinion, there were any significant items to the extent that the plane should be grounded or some fix should be made before it was to depart about 2 hours later. It was due to go on to London. I don't know whether it is going direct to London or by way of JFK—New York, which was Pan Am's primary maintenance base, and then was due to return by the same route.

In any event, this was not accomplished. The following day, Monday, I phoned the Pan Am's principal maintenance inspector in New York and advised him of the discrepancies that I found here, and he said he would look into it. I told him that I would follow up with a full list of discrepancies and when each were deferred to give him an idea of how long the conditions existed. That was the last I heard about it. No indication of what, if any, follow-up action was taken.

The plane did come back. The maintenance was done, but it wasn't done on the plane until it returned to San Francisco, and at that time, the plane was grounded by Pan Am, and several days were required to clear the deferred maintenance discrepancies.

Senator NUNN. Would you read the bottom?

My time has expired, and I will permit this to be my last one. I appreciate your patience.

Would you read the bottom, item 23 of your summaries about your own personal opinion? I believe this is the second flight.

Mr. ALLEY. This is a summation from the last en route report. In that I wasn't getting any response, I decided that I would put something in for the record so that when this report got to Pan Am's principal operations and maintenance inspectors, that at least it would reflect my feelings on it.

In this, I indicated a number of significant items which had been deferred, operational items, the dates, when they were deferred, how long—which would then indicate to the principal maintenance operator how long a plane was flying with inoperative equipment, and then as a final summation to this, well, I will just read.

Senator NUNN. Just read your own words down there. I think that is the best thing to do.

Mr. ALLEY. This is, I think is fairly important. It says, "In general, Pan Am appears to be relying on other carriers to furnish maintenance-related pooled parts on an increasing number of occasions. Many recent instances of using non-Pan Am parts on this aircraft," and then I list the discrepancies.

Then I conclude by saying, "Since I do not believe that this is an isolated example of Pan Am's aircraft maintenance quality or lack thereof, I would be hard-pressed to consider my family riding on Pan Am as a criteria for my feeling regarding the current maintenance practices affecting the conditions of their aircraft."

"Many of the deferred items that Pan Am now show in their aircraft maintenance logbooks result from parts not in stock—" This was a normal signoff in the logbook. This included parts not stocked at many stations, including their main maintenance bases. Also, aircraft seemed to be pushed through maintenance basis in order to meet flight schedules. The flight crew of this particular flight indicated that although they knew of many pilots that had previously expressed concern over Pan Am's aircraft maintenance condition, the company had taken little or no action to correct or upgrade matters."

Then I make a strong recommendation, "If any company ever appeared to deserve a blue ribbon inspection, Pan Am's maintenance division should be a prime and immediate candidate."

And again, I heard no action was ever taken.

[At this point, Senator Cochran entered the hearing room.]

Senator NUNN. No action taken by FAA.

Mr. Chairman, just for the record, we checked with Pan Am on both these. They looked back in their records, and they agree that there was no FAA instructions for them to make these changes. They did submit to us the fact that they had made these changes, but it was entirely voluntary. There were no FAA demands.

Is that consistent with your information, Mr. Alley?

Mr. ALLEY. That's correct.

Senator NUNN. Thank you for your patience, Mr. Chairman. I have run over.

Chairman ROTH. Senator Cohen.

Senator COHEN. Thank you, Mr. Chairman.

I note that while Mr. Alley and Mr. Langdon submitted a joint statement and nonetheless, with a difference in the tenor of their presentations, I would say respectfully, Mr. Alley, that you were far more generous just in your assessment of FAA's role in their handling of this report. It is marked a draft report, and I think that your testimony indicates it was not a draft report; it was a final report; that this report was not rewritten; that rhetoric was not stripped from the report itself; that substantial portions were deleted.

It is a shocking display, in this document, of the portions that were deleted out of your recommendations for the public to have a look at this document outlining what you recommended and what finally appeared. It is a shocking display of what took place in this report. It wasn't rewritten. It was deep-sixed. For all practical purposes, it raises serious questions about the role of the FAA officials involved.

You indicated, Mr. Alley, that apparently, familiarity breeds not only contempt but it might, indeed, breed collusion because it is tantamount to collusive behavior in terms of what is in these recommendations if, in fact, it is accurate, and your gentleman indicate it is, and what finally was recorded or a year later, at least, revealed.

I think, Mr. Langdon, you went fairly close to suggesting this when you indicated that FAA was an accessory to the violations. Would you agree with that?

Mr. LANGDON. Yes, I do.

Senator COHEN. Would it be an unfair conclusion to say that individuals appear to be, if not under the influence, perhaps even in the pocket of certain airlines?

Mr. LANGDON. I don't know that I would like to use those terms exactly.

Senator COHEN. It does raise a question for you.

Mr. LANGDON. It does raise a question, yes, sir.

Senator COHEN. You use some pretty strong language. If, in fact, they are an accessory to the violation, should the FAA and/or the Federal Government be held responsible when there is a Federal airline disaster and a lawsuit and there is a clear pattern of violations that has not been corrected? Would you recommend that the FAA be held responsible?

Mr. LANGDON. That depends on the case, I think.

Senator COHEN. You are talking about accessory to violations.

Mr. LANGDON. If it can be shown the accident resulted because of the FAA's involvement or agreement to violations. It appears to be so.

Senator COHEN. Pretty serious historical pattern of violations, according to your report, right?

Mr. LANGDON. Yes.

Senator COHEN. The House, a few weeks ago, passed legislation which said that if IRS agents engaged in the harassment or a malicious abuse of their position, they could be held personally responsible. Would you recommend that FAA officials who, in your judgment, for one reason or another—call it collusion, call it familiarity, call it human nature—engage in a similar type or a corresponding type of activity and that of cozying up to the industry, should they be held personally liable?

Mr. LANGDON. Absolutely.

Senator COHEN. In your judgment, Mr. Langdon, let me preface it this way: Last week, a subcommittee of this full committee held a hearing in which we investigated kickbacks within the defense industry, and there was a shocking amount of evidence about how prevalent this activity is. In your judgment, is there any cause for suspicion that a similar type of activity might take place with POI's or even higher levels officials within FAA from the industries themselves?

Mr. LANGDON. Senator, I have no such knowledge, but anything is possible.

Senator COHEN. Is it worthy of investigation on this committee's part?

Mr. LANGDON. I would say so, yes.

Senator COHEN. How do you account for the difference in treatment between Alaska Airlines and Continental?

Mr. LANGDON. I can't account for it, sir. Obviously, the differences between the different regions were involved.

Senator COHEN. According to the statements that I have read, you have said that Alaska Airlines got twice the fine for less violations than Continental had.

Mr. **Langdon**. Right. Well, it certainly gives the appearance that there is some kind of a relationship with Continental, but——

Senator **Cohen**. If familiarity breeds collusion or at least a friendly relationship, why didn't that exist with Alaska?

Mr. **Langdon**. I don't know, sir.

Senator **Cohen**. Wouldn't that be worthy of us investigating?

Mr. **Langdon**. When we were involved in this inspection, there was a principal operations inspector who had just been appointed as the principal operations inspector of Continental, and he immediately, apparently, took their side, although I don't think he had had any previous involvement with Continental. Why that is, I don't know. It's certainly food for thought.

Senator **Cohen**. I would think it would be worthy of the committee pursuing further.

Mr. **Langdon**. I think so, too, sir. Yes, I agree.

Senator **Cohen**. Mr. Alley, you indicated that part of the responsibility behind this may be that the 1958 act requires the FAA to also foster air travel and promote the airline industry. That may have made sense within the context of a regulated industry, but does it make sense within the context of a deregulated industry?

Mr. **Alley**. I think it's being more abused than used correctly now. Deregulation, it's almost as though carriers were springing up like mushrooms. If we still required carriers to show that they held or had financial capability to operate before certification, I think that would go a long way to help the cause of only allowing those who potentially had the means to survive to be certificated. It would help the cause a lot.

Senator **Cohen**. Mr. Langdon, did you ever receive a satisfactory explanation as to why, almost without exception, every major recommendation for enforcement against Continental was deleted?

Mr. **Langdon**. When I received an explanation, I found it totally unsatisfactory and unacceptable, Mr. Broderick's reply to me.

Senator **Cohen**. What was the explanation that was given to you?

Mr. **Langdon**. If you will bear with me, I will find it. It is contained in—one moment, please.

[Pause.]

Mr. **Langdon**. Mr. Broderick, in his letter to me——

Senator **Cohen**. Speak up, please. I can't hear.

Mr. **Langdon**. Well, Mr. Broderick, in his response to my letter to Secretary Dole, alleged that, "The team has not produced a report which complied with section 3 of the inspection information package, which had earlier been forwarded to all team members.

"Concern was expressed by us that a number of statements in the draft report were not based on data contained therein, were implied and were all inclusive statements by an unwarranted generalization."

Senator **Cohen**. Were you ever consulted by Mr. Broderick or anyone else concerning the lack of factual documentation for your findings?

Mr. **Langdon**. No, sir, we were not, absolutely not. This is the point.

Senator **Cohen**. Were you ever consulted about the rewriting or deletion or decimation of your report?

Mr. LANGDON. No, we were not.

Senator COHEN. So the first time you saw it was when?

Mr. LANGDON. Oh, I would say I think I saw it after I retired. I think it was at least a year, at least a year after we conducted that inspection.

Senator COHEN. To your knowledge, was any other member of that team consulted with respect to the contents of the final report that you submitted?

Mr. LANGDON. As far as I know, no, sir.

Senator COHEN. Do you agree with that, Mr. Alley?

Mr. ALLEY. Yes.

Senator COHEN. Do you agree with Mr. Langdon's conclusions that there was absolutely no adequate explanation or justifiable explanation for the reasoning that was stated in Mr. Broderick's letter?

Mr. ALLEY. No, I can see no reason whatsoever. In fact, by doing it, it gives the appearance that there was evidence of wrongdoing. I see—nothing was gained by doing it.

Mr. LANGDON. Ironically, Senator, the people that we were working with were all too anxious to take corrective action on—when we gave the company a debriefing in which we read the findings, we did not read them the analysis and the recommendations. And Mr. Clark Onstead, who used to be with the FAA, who is now a member of the board on Continental, took extensive notes, and I presume that some of this was passed onto the operational levels.

But as I said, they kept calling me to ask what corrective action they should take, whether the corrective action they were proposing would meet with my approval, and it really wasn't up to me at that point to say yea or no on that.

Senator COHEN. Didn't you indicate in your own report, however, that whether or not they were waiting from a sign from on high as to whether they had to make these changes, the law clearly required them to go forward without such a directive?

Mr. LANGDON. Absolutely, yes.

Senator COHEN. That is part of your basic finding in section 7

Mr. LANGDON. Yes.

Senator COHEN. The one that was toally deleted. I might point out, for the benefit of the people who don't have a copy of this report, finding No. 7 was totally deleted.

Mr. LANGDON. It was decimated, yes. It wasn't totally deleted. It was reduced from three full pages down to about less than half a page.

Senator COHEN. Let me just hold it up. I will show you what the difference is.

Mr. LANGDON. Yes.

Senator COHEN. This is finding 7, the first page, is gone; finding page 2, that is gone; page 3, that is gone. And you have one, I can't even find the one item that was left.

Mr. LANGDON. I submitted that as one of my exhibits.

Senator COHEN. Mr. Chairman, I think that it is a serious, very serious matter as far as the handling of this report, and I think it warrants the greatest of scrutiny by this committee.

Chairman ROTH. Thank you.

Senator Glenn?

Senator **Glenn**. Thank you, Mr. Chairman. Mr. Alley, is it your view that all these problems we are talking about have very seriously eroded or are in the process of eroding the margin of safety that we have come to expect from our aviation industry?

Mr. **Alley**. The way the inspection program is now concentrated with the number of new carriers that are being certificated and the demands this is putting on the inspection staff that is available plus the fact that many of the seasoned inspectors who came on board the FAA along about 1958, 1960, and 1962 are now retiring while in the interim time there has been virtually no replacement by new inspectors until recently when a number have been hired.

Since these new inspectors require a good deal of training they are not in a position to initially effectively support the FAA's capability relative to overseeing aviation safety. So from this standpoint, I would say at the moment, the FAA is kind of behind the power curve as far as being able to adequately effectively monitor safety aspects of dealing with air carrier operations.

Senator **Glenn**. Mr. Langdon, would you feel that the margin of safety is being seriously eroded in our aviation industry?

Mr. **Langdon**. Yes; I do.

Senator **Glenn**. This lack of sufficient number of inspectors, to oversee things in a deregulation environment, just the thought of cutting back in that area was about as shortsighted as anything we could possibly do. It gets over into this check airman thing.

Back in days long gone, as I recall it, the airline pilots lived in fear of an FAA inspector getting on the airplane at the last minute and riding in the jump seat with them on that flight. They were always under that. They didn't know who was going to get aboard at the last minute. That has gone by the board, lo, many years ago, I gather.

Wouldn't we be better off if we went back to that system rather than allowing a company pilot to check a company pilot, which is, in effect, what we are doing now?

Mr. **Alley**. More importantly, I believe that it is imperative that the FAA be responsible for the initial certification of a pilot flying air carrier type aircraft.

Because of the current sheer lack of qualified inspectors, the FAA cannot now meet the pilot/flight engineer certification requirements of major air carriers caused by rapid expansion, pilot upgrading and general personnel turnover. In order to meet this airmen certification problem, in many instances the FAA is now having to designate company airmen to represent the FAA to conduct checks that the FAA normally would be giving. These FAA designated company check airmen are called FAA examiners.

I feel quite strongly that this is not a proper procedure. The FAA cannot in this way effectively control airman qualification or standardization. While the FAA has limited control over the designated examiner program, it is only as good as the integrity and standards of the individual examiner.

Senator **Glenn**. The basic difficulty here is with deregulation, and I wasn't against deregulation, I had some questions about it. We have gone into this so hot and heavy here and competition is so tough that people are beginning to cut corners. We don't have an adequate number of people out there to make sure the corners are not cut.

That is the very basic problem. The followup to that is we either put enough people out there to make sure that the corners are not cut, or you stop some of the deregulation. That is the choice we have to face here in the Congress.

What are your comments on that? Mr. Langdon.

Mr. LANGDON. Senator, if the company check airman program is properly and strictly administered and enforced by the FAA, I think it should work.

Senator GLENN. I agree on paper it should. But a check airman is still under a lot of pressure to OK his own company pilots.

Mr. LANGDON. That is true, yes.

Senator GLENN. Whether he has been FAA-cleared or not.

Mr. LANGDON. Yes.

Senator GLENN. It seems to me it would be money very well spent to have an FAA inspector fully qualified out there climbing on and riding the jump seat every once in a while and doing these checks. That is pretty well done away with. Do we ever do that now within FAA?

Mr. LANGDON. I believe there are en route inspections still being conducted.

Senator GLENN. Occasionally.

Mr. LANGDON. But I think they have been substantially reduced.

Senator GLENN. The basic bulk of the checks are done by the airline's own check airmen.

Mr. LANGDON. Basically, it is my understanding the FAA do not do the checks. They observe company airmen giving checks. We don't give checks. The only so-called checks that we give are actually in original certification of an airline or an airman.

Senator GLENN. Then we get back to this economic stability; you make a point out of that in your statement, that there should be better economic stability before anybody is approved. I agree with you completely on that. I don't know what the level is there or how we judge that, but you mention the enormous effort that goes into getting an airline cleared for new operation and then maybe they last a few weeks or months at best and go out of business; you have wasted a lot of time; the government has wasted a lot of time; the FAA has; in the meantime, that original operator has tried to cut every single corner he possibly can and get away with it, and air safety goes down hill.

Should there be better qualifications to enter the airline business?

Mr. LANGDON. That is crucial, yes.

[At this point, Senator Cohen withdrew from the hearing room.]

Mr. ALLEY. In years past, when a carrier came up for certification, they had to submit a balance sheet in the various region in which the certification was to be conducted. Based on their tangible assets a determination was made on the regional level whether the carrier potentially had the financial capability to safely provide the type of operation that they proposed.

This, to the best of my knowledge, is not now required. I think if this requirement were reinstituted, it would save the FAA a great deal of potentially wasted inspector time required in dealing with marginally financed carriers whose operation may last only a short time at best.

Senator GLENN. We are getting into a different area here, before my time runs out. You gentlemen are preeminently qualified to comment or observe the different treatment given in the different nine FAA regions.

Would you comment on that as to what the differences are? I note by reputation, at least, and from talking to some of the personnel of air carriers and the new entrants into this field, if you want to get the best treatment you can, you head for Florida and you try and get qualified out of Miami or someplace. Now, maybe that is unfair; I don't know.

But would you comment as to the differences in administration of FAA certification from one region to another? For instance, you mentioned that Continental and Alaska Airlines were treated very differently. Was this because of some of the regional differences or comments in general on the regional differences and what FAA is or is not doing that you think should be done in making a uniform administration or certification.

Mr. LANGDON. Well, I only worked in the Western Pacific Region. I do not know what occurred in the Alaska Region. There is really no way that I can be specific on this.

Senator GLENN. Mr. Alley, would you comment on this? Do you have an observation to make?

Mr. ALLEY. About the only comment I could make is when you mention Miami, for instance, the carrier——

Senator GLENN. Maybe I shouldn't put the heat on one region, but that has been mentioned by several different air carrier personnel.

Mr. ALLEY. I think there is a logic behind that. The fact that there is so much air carrier activity in Miami, it can't be actively policed. A similar condition existed in 1960 in Burbank, CA, where most of the then supplemental, nonsched airlines were formulated.

It appears that wherever the highest degree of air carrier certification activity is, there is very likely to be the least FAA surveillance.

Senator GLENN. Are the number of personnel assigned to these regions commensurate with the different workloads that the regions have? For instance, a lot of them are trying to get certified because a lot of the operations are out of Miami. Are they keeping up? Is the percentage of personnel there indicative of that extra workload?

Mr. ALLEY. I can't say specifically. I know that there is a considerably greater number of personnel at the Miami office. I don't know how the Miami office is organized or run. There are offices, particularly where we are not going into this Flight Standards District Office Organizational concept, where we are combining former General Aviation and Air Carrier Aviation offices together. I believe that this concept has worked to our detriment rather than to our benefit.

Senator GLENN. Do you gentlemen think that we should stop deregulation in its tracks until we catch up with it as far as inspectors go and until we assimilate this bit of deregulation that has gone on so far, until we get control?

Mr. **ALLEY**. I don't think so. I think if we instituted some means of determining a new airline's precertification financial capability, this would go a long ways to help us conserve manpower for better overall air carrier surveillance.

Senator **GLENN**. My time is up.

Chairman **ROTH**. Senator Gore.

Senator **GORE**. Thank you very much, Mr. Chairman.

My colleagues have explored this matter pretty thoroughly, so I will try to take less than my allotted time.

I have enjoyed your testimony or, rather, I have learned a great deal from your testimony. It is not enjoyable, really, to hear the revelations you are bringing us. I would like to commend the two of you, and while I haven't heard Mr. Derry yet, I thought that your testimony obviously has the ring of truth and sincerity. You have been there, you have seen these problems, and you are coming forward and telling us about them.

What you are saying is that as inspectors, you had, on several occasions, reason to cite airlines for serious violations and then, without your participation or—in some cases—evern knowledge, higher up the ladder, these violations were papered over over deleted, and the airlines were given favorable treatment as compared to what you were recommending. That is basically what you are saying, isn't it?

[At this point, Senator Glenn withdrew from the hearing room.]

Mr. **ALLEY**. Yes.

Senator **GORE**. Based on your knowledge of the FAA and based on your experience, is it your belief that this kind of thing is commonplace? Do other inspectors of the rank and grade you held run into similar problems on a frequent basis?

Mr. **LANGDON**. I think it is, yes.

Senator **GORE**. Do you think it is common, Mr. Langdon?

Mr. **LANGDON**. I think, yes. In talk among the inspectors, you hear of many similar cases that occur elsewhere from time to time.

Senator **GORE**. Mr. Alley.

Mr. **ALLEY**. Yes, I think so. Where I think the FAA has its problem is in its midmanagement area. It seems that many of the programs that are directed to the field are done so without regard to field office staffing availability. Enforcement actions that originate in the field seem to often be short-circuited at the midmanagement level and are not effectively handled.

Senator **GORE**. Now, from your responses to earlier questions, I received the impression that you feel that it is not simply a bureaucratic problem. There may be something more serious involved.

Do I get that implication correctly from you?

Mr. **ALLEY**. From my standpoint, it is more in the bureaucratic area. I don't detect anything sinister or illegal. I haven't heard any suggestion of FAA midmanagement personnel getting favored monetary treatment, kickbacks, or anything of that nature. Favored FAA and/or industry treatment, yes, but again, I don't detect anything overtly illegal.

Senator **GORE**. Mr. Langdon.

Mr. **LANGDON**. I agree with Mr. Alley, that I think the problem goes beyond the bureaucracy, because I think the FAA is working under tremendous disadvantage at this time because of the funding, is doing the best that it can with the resources available to it, and they're simply no up to the present workload.

[At this point, Senator Glenn entered the hearing room.]

Senator **GORE**. Clearly, one aspect of it is the effect of deregulation. How long did you serve as an inspector, Mr. Langdon?

Mr. **LANGDON**. For 17½ years.

Senator **GORE**. And you, Mr. Alley, 25½?

Mr. **ALLEY**. Yes.

Senator **GORE**. Did you notice a marked change in the way these matters were handled after deregulation? Has it always been like this, or was there a point during your careers where you began to feel that things changed?

Mr. **LANGDON**. I perceive it as a gradual deterioration that seemed to be accelerated by the advent of deregulation.

Mr. **ALLEY**. Yes, and the loss of experienced inspecter personnel, more recently.

Senator **GORE**. How common is it for people in this midmanagement area where you pinpoint the problem is to go to work for airlines after they leave the FAA?

Mr. **ALLEY**. Well, in many instances, it's very common, but I think more, the problem that I see as far as midmanagement is concerned is, many people get into the midmanagement area from a background which is not suited for making decisions that affect airline operation.

For instance, you may well have an FAA regional director who's background might be air traffic control or it might be general aviation or some other background unrelated to air carrier.

[At this point, Senator Nunn withdrew from the hearing room.]

Mr. **ALLEY**. Without having dealt with air carriers and air carrier-related problems, it is difficult for him or a person in a midmanagement position to make educated judgmental calls as to how things should be handled. Many management people, at least in the western region, lack air carrier background experience. The western region management who were in a position to evaluate at the Continental report, for instance, by and large all had a general aviation background. This is not to say anything derogatory against that particular aspect of the FAA's hierarchy. Only that I believe that they cannot function with reasonable judgment soundness, in matters dealing specifically with air carrier.

Senator **GORE**. I think that is a helpful response, but I would like to pursue the earlier question I asked. Mr. Langdon, is it common knowledge that the best place to go after a stint at the FAA is to one of the airlines?

Mr. **LANGDON**. I don't know if it's common knowledge, but I know it happens very frequently.

Senator **GORE**. It happens very frequently?

Mr. **LANGDON**. Yes.

Senator **GORE**. Is it your opinion that the expectation of a job with the airlines can have the effect of softening an inspector's perspective or softening a manager's perspective when matters affecting the airlines come up?

Mr. **LANGDON**. I feel that purely is personal conjecture, I would say. That's entirely possible.

Senator **Gore**. We are trying to figure out recommendations to fix the problem. Is this an area where we should focus our attention?

Mr. **Langdon**. Well, I think it would be a good area, because I think there are too many cases of people who have been with the FAA who all of a sudden change hats and go to work for industry, go to the industry that they had recently been responsible to regulate.

Senator **Gore**. Has the average tenure in these areas begun to get shorter?

Mr. **Langdon**. I haven't measured that; I don't know.

Senator **Gore**. We will look at that.

Mr. Alley, you wanted to respond on this last question.

Mr. **Alley**. I was just thinking that in line with what you're saying, a possible fix might be similar to a Defense Department regulation wherein retired military personnel must wait 2 years before going to work for a defense contractor. This might be appropriate as far as the FAA is concerned when FAA management seek related aviation industry employment after leaving the FAA.

Senator **Gore**. That was what I was leading up to, and I am glad you said it.

Mr. Chairman, I will recommend to the subcommittee that when we formulate our list of recommendations after these hearings one of them recommend a prohibition against the revolving door phenomenon, similar to the prohibition enacted with respect to the Defense Department, in order to mandate a time lag. Before an FAA official can go to work for an airline, there will have to be a breathing spell so as to diminish this problem of them softening their perspective in anticipation of a lucrative job with the company that they are responsible for regulating the day before.

Do you want to add one thing, Mr. Alley?

Mr. **Alley**. We are aware of many senior FAA officials who left FAA employment and immediately stepped right into fairly substantive administrative airline positions. This rightfully gives the appearance to be a definite conflict of interest.

Senator **Gore**. My conclusion from your testimony is that the FAA is in a terrible condition. There is a mess over there that needs to be fixed. There are a number of recommendations that we will be making to address the problem. I, again, want to thank you for your testimony.

Mr. Chairman, I didn't yield back much of my time, but I will give you some of it back.

Chairman **Roth**. Thank you, Senator Gore.

Senator Cochran.

Senator **Cochran**. Thank you very much, Mr. Chairman.

I wonder if some of the problems that you identified could be solved if inspectors could be rotated from one carrier to another on a regular basis. You talk about a client relationship, a buddy system, in effect, between the inspectors and the carriers they are inspecting.

Couldn't that be stopped if we just simply had, on a regular basis, a requirement that those inspectors had to be moved to another carrier?

Mr. LANGDON. I think that that, my personal opinion, I think that that idea has some merit, but it also has some drawbacks.

Senator COCHRAN. What are they? Tell me what they are.

Mr. LANGDON. It takes a long time for an inspector to really learn a carrier's operations so that he can effectively supervise it. I think the answer lies in supervising the POI's, providing them with the proper leadership and supervision, so that the office manager, for instance, can identify at once if the POI tends to be too lenient. POI's tend to be pretty self-independent operators, and I think they just need more forceful direction and supervision from their supervisors. I think that is where the answer lies.

Senator COCHRAN. Mr. Alley, do you care to respond? Is your response about the same?

Mr. ALLEY. Well, there is difficulty in rotating people. We found problems, particularly in the San Francisco area, where we have a vacancy for an inspector. Even at a relatively high GS level, we found it difficult to entic people to bid on the position strictly because of the high cost of living in the area. It is almost, individually cost prohibitive, so we had problems getting good qualified people. Periodic rotation, while desirable, has its drawbacks. It would be difficult to find people who would be willing to rotate, particularly into high-cost areas.

[At this point, Senator Nunn entered the hearing room.]

Senator COCHRAN. There was a great deal of attention being paid by the subcommittee to this one report that was rewritten by the upper echelon of FAA, taking out of the report findings of fact that were made and recommendations for enforcement, as I understand it.

Senator Gore asked a question about whether or not this is commonplace or is an out-of-the-ordinary event. I got the impression from your answer that you told the subcommittee this is commonplace. Why, if it is commonplace, are we spending so much time on one report, talking about one instance? If there are other instances that are as sensational as this, why aren't they before the subcommittee? Why aren't other carriers being identified as having been the beneficiary of special treatment and rigging of reports and fixing of these facts so that they look better than they really are?

Mr. ALLEY. There are other instances. I was on another special inspection team wherein the exact opposite occurred. This involved a small carrier who experienced a nonfatal accident. It also involved a college sport team and received some national media coverage. The FAA elected to suspend the carriers' operating certificate for a period of about 5 days while a special inspection of the airline was conducted.

We wrote a comprehensive inspection report. Several weeks later we were called back to the regional office to renew the report. This time instead of wanting us to soften the report—like the Continental special inspection report—we were given a subtle suggestion that we should review the report and take out anything that looked favorable to the carrier in it. The only plausible reason being that the carrier's operating certificate was suspended without sufficient cause and the FAA, at the regional legal counsel's suggestion, wanted to portray the carrier in the most negative light possible because of concern for future adverse legal action against the Government.

Here is a small carrier without the influence of some of the major carriers. This appears to be a double standard of FAA justice.

Senator COCHRAN. Mr. Langdon.

Mr. LANGDON. I think that in the case of the Continental inspection, I think that was a particularly bad case. I have never heard of any such extensive changes being made to other reports.

Other reports have been changed, but nothing to compare with this.

[At this point, Senator Nunn withdrew from the hearing room.]

Senator COCHRAN. In our earlier hearing, we had an opportunity to talk with some pilots who had flown for charter carriers and regularly scheduled airlines, and they told us that some of the most dangerous situations existed among the smaller carriers and that they tended to come in for harder licks from the FAA than the larger air carriers.

Is that your understanding, too, from your experience as FAA inspectors?

Mr. LANGDON. Yes.

Mr. ALLEY. Yes; I would say so. The smaller the carrier, the more susceptible it is to the FAA's supervision.

Senator COCHRAN. Mr. Chairman, thank you very much for the opportunity to ask the questions.

Thank you.

Chairman ROTH. I just have three more questions.

I think for purposes of the record, it is rather important that we understand exactly what you are saying. From your answers to Senator Cochran, I gather the Continental case, the rewriting and the whole set of circumstances is—and if I am not correct, please state what is correct—is the exception rather than the rule. Would you say that is a fair statement or not, either one of you?

Mr. LANGDON. I don't know whether it is an exception. It was just an exceptionally bad case.

Chairman ROTH. How about in your own experience?

Mr. LANGDON. Well, I haven't been involved in inspections of other airlines.

Chairman ROTH. Mr. Alley.

Mr. ALLEY. I have been on several similar special inspections. The Continental inspection was the first time that this occurred to my knowledge. The Continental report was greatly changed over what was submitted.

Chairman ROTH. Let me ask you this question: As I understand your testimony, as far as Continental itself was concerned, it was very cooperative with you. You have no reservations about their willingness to work with you; is that correct?

Mr. LANGDON. Well, I would refer you to the working levels, the people in the training school, the instructors, the people at our level of work. They were very cooperative.

I think where problems occurred, they were initiated by higher levels of management.

Chairman ROTH. Could you be more specific? Is this conjecture on your part, or do you have specific evidence of that?

Mr. **Langdon**. Well, the specific evidence that I would refer to, and I think Mr. Alley will agree, was that the people that we worked with were very cooperative and gave every indication of wanting to make changes and make them as quickly as possible. In fact, they gave us a lot of the information, which was later discredited as being hearsay.

I think the—I don't think the problem was in that area. It was obviously from a higher area.

Chairman **Roth**. Mr. Alley, would you respond?

Mr. **Alley**. As far as I was concerned, we had total freedom of movement and total cooperation from all Continental management and personnel that we locally dealt with. From chief pilot to domicile managers, on down. I can't speak for people higher in Continental's management.

Chairman **Roth**. The vice president of operations you did have contact with?

Mr. **Alley**. Yes; limited.

Chairman **Roth**. And he was cooperative?

Mr. **Alley**. Yes.

Chairman **Roth**. Senator Cohen properly pointed out there were very, very substantial deletions in the final report from what you recommended.

Again, do you have any specific information or actual evidence as to why those deletions were made?

Mr. **Langdon**. The only information that I have is the letter that I received from Mr. Broderick about a year after I conducted the investigation telling me what his concerns were, which had never previously been relayed to any of us. I have no idea why those changes were made. It would be purely in an area of conjecture, if I was to make a guess. I am hesitant to do.

Chairman **Roth**. Do you thing that one of the reasons would be there have been some discussions here about the dual function of FAA, both as to the health of the industry and the safety of the airlines? Have you ever had any evidence? I think this is very important if we are going to consider the possibility of reorganization, as has been suggested, that maybe you ought to divorce the two.

Do you think that that could have been a factor here, that the reason for the withholding of the report for a 6-month period or the deletion might have been motivated over concern as to the health of the airlines? Did you ever have anyone make that suggestion to you?

Mr. **Langdon**. Well, nobody has ever made the suggestion, but that's possibly—that would possibly be one of the reasons.

Chairman **Roth**. Mr. Alley.

[At this point, Senator Nunn entered the hearing room.]

Mr. **Alley**. I can see nothing where anyone gained by changing this report with the possible exception that the original report contained the suggestion or recommendations of possible consideration of sanctions or violation action in certain areas and enumerated them.

References to Federal Aviation Regulations [FAR's] that were believed to be in question, were diluted to the point where the possibility of fines against Continental was greatly minimized.

This, to my way of thinking, was the only thing that could have been accomplished other than the fact that the local Federal aviation office in Los Angeles, who held Continental's operating certificate, could be criticized for either impropriety or the lack of proper monitoring of Continental's certificate as it should have been done.

As such, any criticism must involve both the FAA and the lack of possible violation action that should have been taken against Continental.

Chairman ROTH. My final question, and I think this is just for the record: What is the safety record of Continental Airlines during this period? Have they had any difficulties, near misses, or would you know that?

Mr. ALLEY. I personally am not aware of any problems. That information would have to come from the Los Angeles FAA Flight Standards Distict Office. I heard of several minor incidents, but have no direct knowledge. I can't say that they were caused by the fact that Continental was being reorganized at the time.

Mr. LANGDON. May I answer that, Senator?

Chairman ROTH. Yes.

Mr. LANGDON. We had the impression that—I would like to make it clear that we have no ax to grind with Continental, but my criticism was basically the manner in which the inspection report was handled. I believe, I think all of us believe that Continental has many very superior people working for it who are basically very capable.

Why this happened is—I just don't know how to answer that question.

Chairman ROTH. Thank you.

Senator Nunn.

Senator NUNN. Nothing further.

Chairman ROTH. Any further questions?

Senator GORE. Mr. Chairman, just very briefly, I want to pursue the matter about which I questioned Mr. Langdon earlier. There is a distinction between your statement that the Continental episode was the worst example, on the one hand, and on the other, saying that that is the only example you know of where inspectors have not been able to get their recommendations through to the middle-level and top-level management. I questioned you earlier about how common this kind of problem is for inspectors and you responded by saying that based on your conversations with other inspectors, including those in other regions, you believe there are many instances where inspectors have difficulty with their recommendations, and their citations for violations are somehow overturned or modified.

Now, is that correct or not, Mr. Langdon?

Mr. LANGDON. Yes, it is correct. We have addressed ourselves to the changes that were made in the Continental inspection, which was extensive, but one of the criticisms, if you will, that inspectors have of management is that there is a great tendency in management to second-guess the inspectors in the field, who know what they are talking about, who were ther and saw what happened, and then have their recommendations sometimes changed by management, not necessarily as part of a big inspection, but in many day-to-day operations.

Senator **Gore**. It is the testimony from both of you that in your opinion, this is commonplace in the FAA?

Mr. **Langdon**. Well, I experienced it a lot.

Senator **Gore**. Mr. Alley.

Mr. **Alley**. I have personal knowledge of it. I can't say how common it is, though. But it does occur, and it occurs more with the large carriers who have the political wherewithal to circumvent it.

Senator **Gore**. All right. Thank you, Mr. Chairman.

Chairman **Roth**. Just one further question. I gather there is different treatment between the larger and small, yet we have had testimony that a number of these small firms are working on a shoestring, so to speak. So shouldn't that be a matter of special concern?

Mr. **Langdon**. Absolutely.

Chairman **Roth**. Mr. Alley.

Mr. **Alley**. You mean as far as additional inspection of smaller carriers.

Chairman **Roth**. In terms of the ability of the small firms.

Mr. **Alley**. There should be, as I previously mentioned, an interim requirement that new carriers have a demonstrated financial capability before they are considered for certification.

Chairman **Roth**. Thank you very much, gentlemen. I really appreciate your being here and providing us with information.

[The prepared statements of Messrs. Alley and Langdon follow:]

STATEMENT OF JAMES E. ALLEY, JR.
BEFORE THE
U. S. SENATE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
HEARINGS ON
AVIATION SAFETY
March 13, 1986

* * *

Mr. Chairman, my name is James E. Alley, Jr. and I reside in Burlingame, California. I retired from the Federal Aviation Administration on January 3, 1986 from the position of air carrier operations inspector. I served with the FAA as an inspector for approximately 25 1/2 years. The majority of my duty was spent in the San Francisco Air Carrier District Office. Prior to my career with the FAA I spent 16 years with the Navy. 13 years of my active duty was spent flying Navy transport aircraft. I also spent 10 years in the Naval Air Reserves where I continued to fly transport-type aircraft. I have held an FAA airline transport pilot rating since 1952. I have FAA aircraft ratings in the DC-4, DC-6, DC-7, B-707, B-720, B-727, B-747. I have amassed over 10,000 hours of pilot time.

During my career I believed my mission to be that of evaluating the regulatory compliance posture of air carrier operations in order to assure the public of an air industry with optimal safety standards. However, I wish to describe a personal experience I had during 1984 in which I believe the actions by certain FAA management were not in the best interests of regulatory compliance or public safety.

On or about the first week of February 1984, I was assigned as an operational team member to an FAA Special Inspection of Continental Airlines. The team leader for this inspection was Harry Langdon, an air carrier operations inspector with the San Francisco Flight Standards Division Office. The team consisted of six operations inspectors and we were supervised by William Withycombe, the Regional Situation Monitor Staff Chief. At the onset of this special inspection the team was briefed by Clyde DeHart, the FAA Western/Pacific Regional Flight Standards Division Chief. We were subsequently briefed in further detail by Mr. Withycombe. The team was advised that the FAA was to conduct a thorough examination of Continental Airlines' compliance with Part 121 Federal Aviation Regulation and to further determine its overall fitness to operate in air carrier service. The inspection was ordered because Continental had undergone severe labor relations problems while at the same time it had expanded rapidly. There were many newly hired pilots and copilots who replaced those who left the company. DeHart and Withycombe advised the team to do a thorough inspection and "let the chips fall where they may."

The actual inspection lasted approximately four weeks. During the inspection, Mr. Withycombe closely monitored the team's progress. Upon completion of our inspection, the entire team participated in writing the formal report which detailed the findings and recommendations. The report was physically drafted at the FAA Regional Office in Los Angeles, California and required several weeks to complete. Mr. Withycombe monitored daily progress of the report. Withycombe was quite familiar with the inspection's findings and, although he offered general suggestions, he provided no specific instructions with respect to changing the content or the findings. Upon completion of the report, the team's efforts were commended by the Regional management.

Approximately one month later, the operational team members received a priority call to return to the Los Angeles Regional Office. It was there that Clyde DeHart instructed the team to review the report and rewrite any findings which might contain questionable or excessive editorializing. I construed Mr. DeHart's instructions to mean that he wanted the team to write a report that was less critical of Continental and/or the relationship between the FAA and Continental.

The team restructured a number of the report's findings, however, the basic content was not materially changed. Mr. Withycombe inferred that a particular finding, one critical of Continental's check airman operations, be reviewed and changed. The team members were unanimous in the belief that the original wording with this finding not be changed. The team leader, Harry Langdon, advised Withycombe that this particular finding was very significant and that it would have to be someone other than himself who would change the language.

I was unable to monitor the progress of this report; however, I was quite interested in its outcome. Several months later I learned that the report had not yet been officially released. I understood that Regional management was delaying its issuance but I did not know their reasons.

Subsequently, I learned that the team's original report had been rewritten. The new version of our report did not include much of the factual content or most of the recommendations which advocated violation action against Continental.

I cannot comprehend what FAA management hoped to accomplish by revamping extensively the inspection report. The person or persons altering the report were not directly involved in the inspection. Those who changed our report exposed Continental Airlines and the Western Pacific Region of the FAA in a more favorable light. It also reduced the probability of any enforcement action taken against Continental.

I want to stress that the inspection team authored a report which included factual, documented findings. It also included well thought out recommended courses of action for Continental and the FAA so that noted deficiencies could be corrected.

I do not believe that this report was changed, without any of the inspection team's knowledge, merely because management felt it contained excessive rhetoric.

#

STATEMENT
OF
HARRY A. LANGDON
BEFORE THE
SENATE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
ON
AVIATION SAFETY
MARCH 13, 1986

My name is Harry A. Langdon and I live in San Mateo, California.

I have been actively engaged in aviation for 47 years. My experience included flight operation - military, civilian (airliner) and the FAA.

I retired from the FAA in January 1985 after 24½ years service. The last 17½ years I was an Air Carrier Operations Inspector in the San Francisco District Office. I am qualified on the Lockheed Electra, CL44, DC8 and BAC 111 and several other aircraft. My job responsibilities included the certification of flight crews, approval of check airmen and the surveillance of various aspects of airline operations such as en route observations, line checks, proficiency checks on aircraft and simulators, observance of company training programs, records inspections, violation and incident investigation and processing.

My first assignment with the FAA was as a Flight Inspection Pilot for seven years. This involved flying FAA aircraft in airborne calibration of Navaids in the U.S.A., Caribbean, South America and Europe.

I emigrated to the United States in 1948 after serving two years as a pilot with KLM British Airways and seven years as a pilot with the Royal Air Force (R.A.F.), including R.A.F. Transport Command. I served as an airline pilot with several cargo lines and supplemental airlines in the U. S. prior to joining the FAA.

On or about February 3, 1984, the FAA Western Pacific Region organized an inspection of Continental Airlines. The inspection was authorized by Mr. Clyde DeHart, then the Manager, Flight Standards Division AWP 200. I was appointed as leader of the Operations team. Five other inspectors served on the team with me. The team coordinator, who provided us with guidance, supervision and administrative support, was Mr. William Whythicombe, a member of Mr. DeHart's staff. The inspection addressed a wide range of air carrier operations. I will submit, for the hearing record, a list of areas that were subject to our inspection.

The inspection commenced approximately February 6, 1984. Several discrepancies became evident fairly early in the inspection. The most blatant discrepancy was the use by Continental of many "Check Pilots" who had not had the required FAA training or, more importantly, had not gone through the proper FAA authorization procedures. The authority to act as check airmen while conducting Initial Operation Experience (IOE) on newly upgraded Captains is spelled out in the FARs and is made applicable to FAA by policy directives and the air carrier inspector's handbook. IOE consists of 25 hours of regular line flying by a newly appointed Captain under the supervision of s properly trained and FAA approved check airman. IOE is the last stage of the pilot training and qualification process. Afterwards a pilot is on his own. This discrepancy was a matter of considerable concern because Continental, at the time, was engaged in a large expansion of its flight crews. New Captains were being appointed rather rapidly and many were flying with newly hired co-pilots and newly hired flight engineers. The newness of the crews was a very serious factor to the FAA. The check airman program, because of Continental's new personnel, took on a far greater significance than ever. We found that not only were the requirements for the training and proper appointment procedures being flouted by Continental and the local FAA office but the company was being supported in their policies by the local FAA Flight Standards District Office. Moreover, we were told by CALA management personnel that this practice had been going on for some time at Continental. This was an altogether astonishing and alarming situation. We immediately brought the problem to the attention of the Continental Principal Operations Inspector

(POI), who was newly appointed. The POI, acting on behalf of Continental's interests, secured authorization from FAA headquarters in Washington to permit Continental to continue these illegal practices for another 30 days. The local FAA office was condoning an ongoing series of clear-cut violations by numerous pilots. The arbitrary granting of a 30-day extension by headquarters personnel made the FAA an accessory to the violations. The matter is outlined in detail in the original version of our Check Airman Finding #7.

After days of discussion among the team members, we concluded that the situation should not be permitted to continue for even one more day. On March 6, 1984 we presented the Los Angeles International Airport Flight Standards District Office (LAX FSDO) with an advance draft of our Check Airman Finding #7. We requested an immediate cessation of the illegal use of check airmen; however, the recommendation was rejected, apparently on the grounds that Washington headquarters personnel had already authorized a 30-day extension.

We continued our inspections and, upon completion, on March 16, 1984 a meeting was held with the FAA and Continental personnel. The company was debriefed on our entire inspection, including the check airman issue. I was so concerned at the FAA's inaction regarding the check airman violation that, at the time our report was finalized, I took the precaution of making and keeping a copy of our entire report. Until that time, we had been supervised by Mr. Whythicombe during every step of the inspection and during the preparation and writing of the report. Although the check airman issue was still left unresolved, the team's findings, supporting documentation and write-ups were not questioned during the time we were conducting the inspection and concluding our report, although Mr. Whythicombe and Mr. DeHart were kept fully apprised at all times of our findings.

On April 12, 1984, about one month after debriefing Continental, the team was reconvened in Los Angeles by Mr. DeHart. DeHart informed the team that Mr. McClure, the Western/Pacific Regional Director, wanted us to remove some of the rhetoric from the report. Mr. Whythicombe was now "on the opposite side of the table". Whythicombe directed the team to reword the write-ups he had previously approved. However, with respect to the check airman finding, the changes he required us to make were, in my opinion, of a substantive nature. I refused to agree to any substantive changes. The other members of the inspection team were unanimous in agreement that the issue was critical, amply documented and supported by FARs, FAA directives, etc. When Whythicombe insisted that I make the changes, I declined any further involvement in the matter and left the meeting.

I later learned that our original report was locked away in a safe for months. I repeatedly received calls from various Continental personnel who wanted information from the report so they could take corrective action. Since I was no longer involved during this time, I referred them to the POI whose responsibility it now was to see that Continental initiated proper corrective action.

In September of 1984, I obtained a copy of the check airman finding #7, and found that our 3 page report describing that issue had been reduced to less than one page. The findings were severely watered down. Upon my retirement in January 1985, I wrote a letter to Secretary Dole, protesting FAA's action in this matter. I would like to submit a copy of that letter for the hearing record. I also sent copies to Administrator Engen with Exhibits, with information copies to Mr. McClure, Mr. DeHart and the other members of my team. I also want to submit this document to the Subcommittee hearing record.

Mr. Broderick, Associate FAA Administrator, responded to my letter to Mrs. Dole. In this letter to me, Broderick made certain assertions that pointed to certain "failings" in our report. The assertions were clearly false. Moreover, the team had never been apprised of any such criticism except for an excessive use of rhetoric. I emphasize again that, at no time, had I or any member of the inspection team been questioned as to the validity of our findings. In his response to me, Mr. Broderick agreed with our interpretation of the FARs in regards to check airmen. If this is so, on what basis could Washington headquarters personnel give Continental 30 days rather than 24 hours to comply with the regulations? The FAA, by permitting a series of known violations to continue, was itself a knowing accessory.

Several months later I received a copy of the entire report after the Western/Pacific Region had revised it. I found that it now contained numerous substantive changes, changes made without the consultation of team members. These changes went far beyond the issue of check airmen, including deletions and alterations on a wide variety of other problems we had found at Continental. I also found that the original version of the inspection report had been stamped "draft". The report was not a draft. The company had been debriefed on the basis of our original unaltered version. The debriefing occurred during a meeting which included Mr. DeHart and the Regional Deputy Director as well as the LAX FSDO chief and members of his staff.

Approximately one year later the FAA ordered another special team to conduct an inspection of Continental Airlines. The inspection was unprecedented in that the team included four FAA attorneys. Also unprecedented was the procedure of conducting a press conference to publicize the findings of the second team.

Contrary to what Mr. Broderick had informed me in his letter of February 8, 1985, in which he agreed with our interpretation regarding training and the FAA approval required for check airmen conducting IOE, Mr. Ayton, the subsequent inspection team leader, stated at a press conference that Continental Airlines pilots had now received the training and FAA approvals "even though they didn't need it". Mr. McClure, at that same press conference, stated that the changes to the original report were made because there were statements that were not "factual", and, "when the FAA asked Harry Langdon to remove statements that were not factual, he refused." I want to stress that questions of factuality were never raised to me or to any member of our team. And I want to add that the "factuality" of all substantive issues, was, in the opinion of all team members, beyond question and well substantiated by ample documentation supplied by the team but removed from the so-called draft.

The Air Lines Pilots Association (ALPA) did not attend the press conference. ALPA representatives were invited to a special meeting with the inspection team immediately after the press conference, I was later informed. During this meeting ALPA was informed that the second team had been instructed not to look at the issues of pilot training and check airmen. Soon thereafter ALPA pressured the FAA and ultimately enforcement action was taken against Continental, resulting in about $300,000 fines. (I believe the FAA assessed $600,000 fines against Alaska Airlines for a far lesser number of similar violations.)

I should also add that in our original report we had recommended some 20 violation actions for the infraction of some 31 regulations - all of which were removed from the Western/Pacific version of our report.

#

Chairman **Roth**. Now we would like to proceed with Mr. Derry. I would like everybody to know, so they can plan accordingly, we will continue until 2 o'clock, at which time the Armed Services Committee, I understand, has this room.

So we do hope to complete this hearing by that time. I want to express my appreciation to you, Mr. Derry, for your patience. I understand you are going to summarize your statement.

TESTIMONY OF MELVIN F. DERRY, TASK FORCE MEMBER TO EVALUATE NATI INSPECTION REPORTS

Mr. **Derry**. Thank you, Mr. Chairman, for the opportunity of addressing the committee.

My name is Melvin F. Derry, and I reside in Scottsdale, AZ. I began my flying career in about 1940. I enrolled in the U.S. Army Air Corps. I served as a four-engine B-17, B-24, and B-29 pilot, and from 1945 to 1950, I owned and managed a large fixed-base operation engaging in flight instruction, air taxi, and agricultural activities.

In 1950, I joined the staff of the United Airlines in Seattle as a first officer of a DC-3- and DC-6-type aircraft, and from 1952 to 1957, I served as a civilian flight instructor for the Air Force in Hondo, TX, and Bartow, FL.

In 1957, I joined the Civil Aeronautics Authority, which is the predecessor of the FAA, and I served from 1957 to 1960 as a general aviation operations inspector with general aviation and air carrier duties in the northern half of Alaska. From 1960 to 1964, I served as the manager of the General Aviation District Office in Anchorage, with responsibility in the southern half of Alaska. That is a GADO, General Aviation District Office.

And subsequently assignments were in the southwest region as an enforcement specialist; as an assistant branch chief in the Houston area office; and in Washington, as a section chief writing regulations, and as a branch chief, Commuter VSTOL, which was the beginning of the commuter operation, primarily under Allegheny Commuter, and the air taxi postal service.

I then went to Oklahoma City as an assistant branch chief in all training for FAA flight standards people and became the assistant division chief, operations in Washington with air carrier general aviation responsibility, and from there, on to Alaska as the chief, division chief of——

Chairman **Roth**. I wonder, Mr. Derry, if you could summarize the background and shorten your testimony, if that is possible.

Mr. **Derry**. OK.

I hold an airline transport pilot's certificate of approximately 10,000. In 1975, I retired from the FAA, and in 1978, I went to work for Sea Airmotive, Inc., of Anchorage, AK, which I guess would fit into the category of 3 years subsequent to retiring from FAA before working for the industry.

And in April 1984, I was contacted by Charles Euler, air carrier branch chief, FAA headquarters, to participate on the evaluation and inspection reports of the NATI, National Air Transportation Inspections 1 and 2. Those inspections came about as a result of the Secretary of Transportation's request for an indepth increased number and frequency of air carrier inspections and short notice inspections to be conducted on all large air carriers and commuter carriers.

As a result of that, the FAA Administrator issued Notice 8000.246, which was a 90-day—correction, phase 1 consisted of 3 weeks of inspections and phase 2 consisted of a 90-day indepth inspection.

[At this point, Senator Cochran withdrew from the hearing room.]

Mr. **Derry**. Our mission of the six retired FAA people that were hired back by the FAA was to evaluate and collect data and collate it for an ongoing program, and also to evaluate the inspections that were conducted at that time on this program.

The team was comprised of personnel at the general aviation and air carrier operations and maintenance background. And we were advised to be critical of the FAA, as well as the industry. And Charles Euler, the branch chief, made it very clear that that was exactly what he wanted, was any particular criticism of both the FAA's manner of doing business, and we should bring that out in our report.

At the completion of this project, my observations, my personal ones, was that the FAA lacked a sufficient number of experienced and knowledgeable air carrier personnel capable of conducting the necessary inspections, surveillance and certification. They did not appear to have the experience or the staffing necessary to certificate or to evaluate the operations of the systems of the new airline entrants and expanding air carriers.

We have a report that we prepared as a memorandum on evaluation of National Air Transportation Inspection Program reports, which was the one submitted for NATI 1 and NATI 2 by the FAA themselves.

The industry compliance posture at that time, as a result of our evaluating phase 1 inspections of which we looked at 13,634 inspection reports, 64 of the 303 carriers fell into the category of what we considered less than the desirable industry compliance posture. As an example, of the 13,634 reports, I believe there were 4,606 of those that contained discrepancy notices of various severity, and that would equate to one discrepancy for three inspections.

The methodology and guidelines that we used in developing the phase 1 procedures, we felt, would establish a data base that could be used for the FAA in a centralized concept so that at any time, the FAA could determine the compliance posture of any of the carriers as a result of the inspections that were done on a daily basis.

I guess I need to point out that the phase 1 differed the phase 2 in that phase 1 was a test of the product. By that we mean the results of the training program, the manuals, the maintenance programs and so on that were established by the carriers and their method of carrying it out, whereas the phase 2 was a more indepth look into each of the carriers that were determined from phase 1 to have numerous discrepancies that needed to be looked into because of those discrepancies, and of the 303 total carriers looked at, 43 received a phase 2 indepth inspection.

We found that the management of the carriers were not fulfilling their statutory obligations. We also found that the FAA inspectors were not conducting their surveillance and required inspections. We found the staffing of the FAA inadequate. We found the geographical area of concept ineffective, and the training of FAA inspectors was inadequate, as was the hiring procedure for FAA personnel.

And we also found that due to the quality and legibility of the reports, that many of the inspectors were not being held accountable for their daily actions or actions as a result of this inspection.

Standardization was lacking, and that was agreed upon by the industry as well as the FAA from our review of the reports. As a result of our analysis, we came up with several conclusions and recommendations that have been summarized in a document which I would like to submit for the hearing record, and we don't have it marked as an exhibit, but it is recommendations from memorandum on evaluation of National Air Transportation Inspection Program, inspection report, dated April 1985.[1]

This report basically summarizes the findings of the task force and makes the recommendations that we, the FAA, use, or establish a central location, preferably in the headquarters, Washington area somewhere, of a centralized program, keeping in mind that the NATI Program was centralized.

To backtrack just a little bit and throw this thing into perspective, in 1972, an amendment to 135 was begun in Washington headquarters to incorporate into 135 all of the regulatory requirements that could be applied from 121, FAR 121.

In 1978, we had deregulation. At that time, we had 12,012 inspectors, FAA flight standards inspectors. We begun deregulation—I mean decentralization of the FAA, eliminating the headquarters staff, moving them to the field. At that time, we had 12 regional offices, of which we now have 9. In the same year, 1978, the amendment which was begun way back in 1972 culminated in the largest change to the FAR 135, the largest undertaking of an amendment to any regulation at that time, which hit the field, the industry and the FAA. Special Federal Aviation Regulation 38 changed the gross weight of an aircraft from 12,500 pounds to 35 passengers and/or 7,900 pounds or less as a dividing line.

All of these things culminated in throwing an additional load on the industry, as well as the FAA field offices, headquarters, and regional offices. The biggest problem that we saw was the nine region concept of decentralization, wherein you had nine people implementing the directives that normally were coming from a centralized system of headquarters, within their own individual changes to the directives.

As an example, the air carrier handbook 84030.6B, as it was known in 1984, had not been amended from 1978 until 1983 to any great degree. This is the field inspector's handbook on how to do the job. So as a result of the lack of directive material, each of the nine regions implemented their own directives with their own separate ways of doing business.

Thus, you had the result of what you heard earlier, of the testimony of the carriers shopping around to find a place where they could do their certification process with the least amount of hassle, and also to get away from certain inspectors that were holding their feet to the fire.

---

[1] The information referred to follows Mr. Derry's prepared statement on p. 179.

In addition to all of this, you must realize that prior to deregulation, we had in the neighborhood of 60 large carriers, of which now there is 129 or 159 or something like that, not counting commuters, which, dating back to the beginning of the commuter industry, started with about 25, and now you have someplace in the neighborhood of 4,000, I assume.

You have to realize that we had a stable industry wherein many of your experienced inspectors, the old heads, so to speak, with a lot of background and a lot of knowledge on how to do the job as an FAA inspector with a lot of industry and military background in the large aircraft and small, for that matter, had never gone through a certification process. There was never a need for it.

We had a fixed number of carriers, and there are very few of the inspectors that had ever gone through the process. So along comes deregulation. A lot of the people were offered early retirements; a lot of people took retirement, and a lot of the old heads went by the wayside, and you therefore had no training at Oklahoma City to train these inspectors on how to do a certification process, so you had an extra burden thrown on those particular people that still remained.

A good example is the principal ops inspector assigned to People Express. They began, and in a 3-year period, went to 41 aircraft, as I understand it, 41 aircraft with something like 1,000 employees, and they had one principal ops inspector that was knowledgeable and one or two new hirees, most who had not even been through indoctrination at Oklahoma City.

Because of our task force making the call and finding this out and discussing it with Wes Euler and so on, five additional people were given to that office, but the five additional people were new trainees, so therefore, the inspector, the old head, had to dilute his time by trying to train these trainees. So you had a further dilution of the experience level.

To simplify the process of what I am leading up to, we have decentralized, and I think this is going the wrong way. It works fine if you are a shoe manufacturer or a McDonald hamburger builder or something like that; you go to a local area, and that's where it belongs.

But in the airline industry, we have shrunk the world, so to speak. We have ended up with a carrier flying in the national Federal airspace under Federal aviation regulations, and yet we have nine separate regions, all dictating their own little input into this system.

Therefore, our recommendation as task force, one, is that FAA centralize, in a national field office, to regulate the air transportation industry; and in that, our recommendation is all people engaged in the carriage of people that ride in an aircraft where they pay their money and get a ticket should be provided an equivalent level of safety. That includes the helicopter operation; the passenger sightseeing operations that fly over Grand Canyon, the large carriers, the commuters, and the on-demand air taxi, which pretty well covers the whole gamut.

Senator **Glenn**. Mr. Chairman, can I interrupt just 1 second? I note the light is on. We have a vote.

Chairman **Roth**. Yes.

Senator **Glenn**. Do you want to keep the hearing running and come back? I will be glad to run and go vote and get back.

Chairman **Roth**. Why don't we do that?

[At this point, Senators Nunn and Glenn withdrew from the hearing room.]

[The letter of authority follows:]

U.S. Senate,
Committee on Governmental Affairs,
Senate Permanent Subcommittee on Investigations,
Washington, DC.

Pursuant to Rule 5 of the Rules of Procedure of the Senate Permanent Subcommittee on Investigations of the Committee on Governmental Affairs, permission is hereby granted for the Chairman, or any Member of the Subcommittee as designated by the Chairman, to conduct open and/or executive hearings without a quorum of two Members for the administration of oaths and taking testimony in connection with hearings on Airline Safety in the United States, to be held on March 6 and 13, 1986.

W.V. Roth, Jr., *Chairman.*
Sam Nunn, *Ranking Minority Member.*

Chairman **Roth**. Please proceed.

Mr. **Derry**. The recommendation that the FAA headquarters remind all air carrier management officials of their obligation through the act of 1958 would fall automatically under a centralized concept. You would then have a headquarters directing the program throughout the whole system. You would have a standardization, and you would also have a holding accountable of all of the people down the line to the filed offices.

We also recommend that the regional counsel support the field inspectors' enforcement actions vigorously, which we found, in many cases, as a result of NATI 1 and 2 of inspections that the regional counsels, because of other duties and so on, were not processing the enforcement cases which, as a result of that, left the industry with the impression that the FAA was becoming more lenient and less enforcement oriented.

We understand that the FAA has an ongoing program at Oklahoma City as a result of our discussion with them at the time and the implementation of a maintenance program, training program, and a principal operations inspector program. We had recommended that the Oklahoma City Center Academy set up a training program wherein a group of FAA inspectors represent the industry and a group represent the FAA during the certification process, both ops, maintenance, and also avionics, wherein the manuals, training programs, and so on are developed, and the air carrier people look at them in the certification process of a carrier. It is a very voluminous thing. The inspector must look at what the carrier has said he's going to do in the way of a printed document called the operations manual, the flight standards manual, which is developed for each type aircraft he's going to operate, and also a maintenance manual on how he's going to conduct the maintenance.

Now, each of the FAR 121 sections are taken apart, and the carrier sends a letter to the district office as to how that operator intends to comply with that regulation.

The inspector must sit down and analyze that and look at it and determine: Has he done that with his manual? Then he has to go out and prove that by riding, proving en routes, and this is done without carrying passengers. This is during the certification process.

So it's a very voluminous thing. The geographical area concept is another problem that—the results of which I didn't cover, but you could also throw in the deregulation and decentralization and these other regulatory changes, and the geographical area concept functions this way: If a carrier is certificated in Chicago and does most of his flying up and down the east coast, the inspector that's assigned to that carrier, the principal ops, avionics, and maintenance inspector in Chicago may not see that airplane or that carrier operation, but he has the manuals, and he can review them in his office, which he's supposed to do on an ongoing basis, and all amendments that the carrier makes to any of those manuals would show up at that principal inspectors' certificate holding district office.

The maintenance base may be located in Miami, as an example. So therefore, the Miami district office and those district offices up and down the east coast, because those aircraft are in their geographical area because of this concept, they are held responsible for surveilling, inspecting, and so on of those carriers and submitting their inspection reports to that certificate-holding district office.

This is done without any written requests, so to speak, as opposed to what we recommend as going back to a procedure, or one similar to it, of the old work request program, wherein the certificate-holding district office, each year on a continuing basis, sets down and determines the frequency and numbers of inspections that needs to be accomplished on his carrier throughout wherever it flies, whether it's worldwide or United States-wide. He, then, sends those work requests through the regional office to that certificate-holding district office.

[At this point, Senator Gore entered the hearing room.]

Mr. **Derry**. They, then, end up with the proper staffing because of knowing what their workload is going to be. So the people are transferred around where they need to be transferred to accommodate that particular work function, as opposed to the way it is today where maybe the local district office is saddled with their own operation which maybe they have a considerable number, and they ignore the others going through. So as a result of that, the certificate-holding district office sits with no indication of having anyone looking at his carrier.

[At this point, Senator Gore withdrew from the hearing room.]

Mr. **Derry**. The hiring procedures should be amended. It has not changed, to my knowledge. It still remains pretty much the same: An air carrier inspector must have an airline transport pilot's certificate, which means the basic minimum requirement is 1,500 hours at age 23. If he's going to work in general aviation, he can come onboard with a commercial flight instructor and an instrument rating with 250 hours. The hiring process at one time—I don't know what it is today; I assume we are hiring at the GS-11 level—but at one time, it was GS-7, and while I was onboard, it went down to GS-5 level.

So you can imagine the level of experience of people that you were recruiting at that grade, which brought numerous people to the FAA with a very minimum of experience.

I might point out that once a person comes onboard with the FAA, he does not get industry experience or any semblance of it, because in the FAA, you are primarily geared to doing an analysis and an inspection of a carrier, and you are not flying on a daily basis within the system.

Chairman ROTH. Mr. Derry, I am going to have to interrupt, because I will have to go and vote, too. As soon as Senator Nunn returns, I would ask if you could quickly summarize whatever is left, because we do have questions.

Mr. DERRY. I can summarize it all right here.

Chairman ROTH. I will have to leave, because I have to get down to the floor in time to vote. You can do that when he returns. The subcommittee is in recess.

[Brief recess. Members of the subcommittee present at the time of recess: Senator Roth. Members present after the taking of a brief recess: Senator Glenn.]

Senator GLENN [presiding]. The hearing will be in order. The chairman will be back as fast as he can. He indicated we should go ahead with the hearing. So Mr. Derry, if you will proceed with your testimony?

Mr. DERRY. I will summarize the last little bit I have here.

The one thing that I feel should be emphasized is the standardization which we feel, as a task force. we found as a task force, was quite lacking due to the decentralization, and therefore, our main recommendation on that was that we establish, the FAA establish a central field office with line authority from the Associate Administrator on down through the district offices.

With that, I would say that was the end of our testimony.

Senator GLENN. Thank you, Mr. Derry. I am sorry I had to leave early, because we were on a vote on the floor, and I didn't hear that part of your testimony.

But I want to ask, the first conclusion of the task force's review of NATI says that a rate of 21.1 percent for carriers exceeding a certain threshold of adverse comments and unsatisfactory reports, and I quote the words of your report, "represents a less than desirable overall industry compliance posture."

That is a very careful wording, obviously. And obviously, we would like to have no adverse comments or unsatisfactory reports, because the point is, I question that 21.1-percent rating.

Is the overall industry compliance posture as clear as that statistic would indicate from a safety standpoint?

Mr. DERRY. Well, sir, the thing to keep in mind is we rated, as we call them, the adverse comments on a severity of 1 through 3, and 1 indicated that a discrepancy had little or no impact on safety; No. 2 could have the second degree of some impact on safety; and 3 would be a serious consequence.

So based on that statement, it's predicated on any adverse comment, which could be such a thing as an adverse comment rated as 1, flight attendant's manual was noncurrent; but the other three were, which would have been—which is a discrepancy, and that was rated as, picked up as 1.

Senator GLENN. What is category 3 acceptability, any?

Mr. DERRY. Well, that was a judgmental, subjective thing; going through it, looking at them as an example, were a few cases of large carriers' first officers, copilots having expired medicals.

Senator GLENN. Would that be a category 3? Would that be a safety of flight item?

Mr. DERRY. It was considered as such, yes, because there was no way of knowing what the person's medical status was at that time. He had an expired medical, and it also related back to the fact that the company procedures for maintaining their records of their airmen, which is a regulatory requirement, would be a violation, not only to the pilot but to the company.

Senator GLENN. Category 3 was not automatically a grounding criteria, then, for the airline or the individual; is that correct?

Mr. DERRY. No, sir, no, sir.

It had an adverse effect or a high potential for a safety implication.

Senator GLENN. Is that all the categories, then, just categories 1, 2, and 3?

Mr. DERRY. Yes.

Senator GLENN. There is nothing that is an absolute? Then you would have some judgment, then, in category 3, I guess?

Mr. DERRY. Yes, sir.

Senator GLENN. There is no absolute category 4 that if that was on the list, they are grounded, period?

Mr. DERRY. No, sir, that was based, primarily, we looked at it from the standpoint of the inspection reports being done by the inspectors, and in numerous cases, where these things were found and we would have graded it as adverse, 3, action had already been taken; the carrier had been suspended or the person grounded or something to that effect.

Senator GLENN. Should there be a category 4, an absolute-grounding category?

Mr. DERRY. Well, there could have been, but keep in mind, sir, that this was a way of collating and making a data base for our particular ongoing program at that time, which was merely a review of the inspections that had already been done.

Now, to carry that through, which is our recommendation, and implemented as an ongoing program, yes; it would be very conceivable to have a category 4, that whenever category 4 showed up, it automatically required a grounding.

[At this point, Senator Nunn entered the hearing room.]

Senator GLENN. As I understand it, if you had an unsatisfactory NATI 1, based on the severity of adverse comment, that is what pushed you into category 2, which was a more detailed inspection; is that correct?

Mr. DERRY. Yes, sir, That was accomplished by—keep in mind that the NATI program was a centralized concept, which was headed up in the headquarters and directed to the regions for a one-time, ongoing program.

Senator GLENN. General comment on this: On the deregulation, has this inundated FAA? Are they over their heads with deregulation?

Mr. DERRY. I don't think deregulation has, in itself, accomplished that. I think it's the other factors that all hit at the same time, which I outlined the other things involved: That the staffing went down at a time that the staffing should have increased, and my own personal feeling is deregulation should have been phased in; it shouldn't have been something that just came along.

Senator GLENN. I couldn't agree with you more, and I think I said in my opening statement, it was deregulation and cutting the personnel to oversee it.

Mr. DERRY. Right, I agree with that.

Senator GLENN. The more I have listened here this morning, the more I am rapidly coming to the conclusion, and you comment or not comment on this, that we either ought to stop deregulation for a year until FAA and all the oversight functions come back and the FAA people are trained to do that job. It is not their fault, necessarily. We are being very critical here of FAA people, some of them here this morning, but here they were faced with budgetary cuts that never should have been made involving flight safety. At the same time their job is tripling, or quadrupling by the figures you gave awhile ago.

We used to have 47 carriers, and now we have 159? Is that majors? That is not all the little ones, is it?

Mr. DERRY. No, no, that is the large carriers. They went from 60 to 159-some odd.

Senator GLENN. I guess FAA can testify how many they are trying to oversee later on. But their other job was at least tripling in that area and probably quadrupling across the board; at the same time, for budgetary reasons, we cut back, and I just think that is wrong. We ought to have the number of people to oversee this, because it is so important, or we stop the basic problem of deregulation for a year or hold it in abeyance for a year until we catch up, it would seem to me.

Mr. DERRY. Yes, sir.

Senator GLENN. Thank you.

Sam, you have got the chair.

Senator NUNN [presiding]. I would like to thank all the witnesses for appearing this morning. You have been very helpful and very patient. We think that the testimony you have given will be very beneficial to us, and, we hope, to the FAA in analyzing how we can help them improve their own safety performance. Thank you for being here.

[Mr. Derry's prepared statement, with an attachment, follows:]

STATEMENT
OF
MELVIN F. DERRY
BEFORE THE
PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
ON
AVIATION SAFETY
MARCH 13, 1986

My name is Melvin F. Derry and I reside in Scottsdale, Arizona.

I received my private pilot certificate in 1942 and enrolled in the United States Army Air Corps, where I served until 1945 as a four-engine B-17, B-24, and B-29 pilot. From 1945 to 1950 I owned and managed a large fixed base operation engaging in flight instruction, air taxi, and agricultural activities.

In 1950, I joined the staff of United Airlines in Seattle, Washington as first officer for DC-3 and DC-6B aircraft. From 1952 to 1957, I served as civilian flight instructor for the U.S. Air Force at Hondo, Texas and Bartow, Florida and was promoted to Standardization (Flight) Officer, Senior Instructor, Assistant Squadron Commander, for PA-18, T-6, T-28, and T-34 aircraft.

I joined the Federal Aviation Administration's predecessor, the Civil Aeronautics Authority, in 1957 and served until 1960 as General Aviation Inspector at Fairbanks, Alaska, with responsibility for all General Aviation and Air Carrier operations activities within the northern half of Alaska. From 1960 through 1964, I served as the Manager of the Flight Standards General Aviation District Office (GADO) at Anchorage, Alaska.

Subsequent FAA assignments included one year as Enforcement Specialist in the Southwest Regional Office; two years as Assistant Branch Chief, Flight Standards, at the Houston Area Office; two years as Section Chief, General

Aviations Branch, Flight Standards, Washington, D.C.; Assistant Branch Chief, Flight Standards Training Aeronautical Center, Oklahoma City, Oklahoma; Branch Chief, Commuter VSTOL Branch, Flight Standards, Washington, D.C.; Assistant Division Chief, Flight Operations, Air Carrier and General Aviation, Flight Standards, Washington, D.C.; and Division Chief, Flight Standards Service, involving responsibility for General Aviation, Air Carrier, Engineering and Airways Flight Inspection and Transportation Logistics for the FAA Alaskan Region.

I hold an airline transport pilot certificate with commercial privileges for airplane single and multi-engine, land and sea; rotocraft-helicopter and flight instructor ratings. I have in excess of 10,000 hours as a pilot.

In 1975, I retired from FAA, and since that time have provided consulting services to several carriers and served as General Manager and Director of Operations for Sea Airmotive, Inc. of Anchorage, Alaska. I have also served as a consultant in several aviation lawsuits.

In April of 1984 I was contacted by Charles W. Euler, Air Carrier Branch Chief of the FAA headquarters, to participate as part of a task force to evaluate the inspection reports of the National Aviation Transportation Inspections I and II (NATI I and II) which had been conducted by the FAA during 1984. Mr. Euler also served as the national coordinator of the NATI I and II inspections.

The NATI inspections were precipitated by a February 1984 directive of the Secretary of Transportion. The Secretary directed the Federal Aviation Administration to (1) increase the number and frequency of air carrier inspections, (2) conduct a series of short-notice inspections into any and all safety-related areas associated with air carrier operations, (3) conduct inspections of all segments of the industry including established and new entrant air carriers, commuters and large air carriers, flight and ground operations and maintenance procedures and records, and (4) rectify specific problems identified during the course of these inspections. In response to that directive, on March 4, 1984, the FAA Administrator initiated, through Notice 8000.246, a 90-day, two-phase National Air Transportation Inspection (NATI) program. The overall goals for the program were:

a. Conduct increased numbers of inspections and surveillance of all FAR Part 121 air carriers and Federal Aviation Regulations (FAR) Part 135 commuter air carriers.

b. Verify and assure, on a nationwide basis, the system integrity of air carriers that conduct air transportation.

c. Optimize the use of inspector resources to detect system deficiencies and to effectively resolve any problems or issues that are identified.

d. Intensify the promotion of safe operating practices.

e. Minimize the inspection impact on air carrier operational activities and the traveling public.

f. An interrelated goal involves the collection and collation of information, to provide a data base for the DOT/FAA long-term review of the entire aviation safety inspection program.

Our mission was to insure that the data collected as a result of the NATI inspections were submitted to a comprehensive and professional analysis by qualified experts. The task force consisted of retired FAA inspectors with backgrounds in Air Carrier and General Aviation flight standards operations and maintenance experience. The members of the task force reflected a blend of FAA, military and industry experience as well as an extensive corporate knowledge of the aviation industry spanning thirty years or more.

The FAA selected retirees in this effort in order to attain objectivity and also to conserve their own resources. The FAA, specifically Mr. Euler, was adamant that we pursue this mission with directions that we disclose any constructive criticism whether it be directed toward the FAA or the airline industry.

The task force reviewed over 13,000 inspection reports which were produced as a result of NATI Phase I alone. Phase II involved the review of many more in-depth reports generated as a result of Phase I. The overall quality of the inspection reports ranged from poor to excellent. In reviewing the reports, we often came across findings that were non-regulatory, incomprehensible and biased. Nonetheless, we believe the data produced by these inspections presents a reasonably accurate picture of the state of compliance in the aviation industry.

At the completion of this project, my observation of the FAA was that it lacked a sufficient number of experienced and knowledgeable air carrier personnel capable of conducting the necessary inspections, surveillance, and certification. They did not appear to have the experience or the staffing necessary to certificate or to evaluate the operations or the systems of the new airline entrants and expanding air carriers.

The task force, upon completion of our designated project, prepared a report entitled "Memorandum On Evaluation Of National Air Transportation Inspection Program Reports." In the report we reached the following conclusions regarding both the airline industry and the FAA:

THE AIR TRANSPORTATION INDUSTRY

1. Industry Compliance Posture

(1) In certain cases there was an insufficient number of inspections conducted on an air carrier to provide for analytical confidence with respect to those certain cases. Nevertheless, examination of the gross data shows that 64 (19 "Phase II" and 45 other air carriers that did not receive Phase II inspections) or 21.1% of the 303 air carriers exceeded the Population Less Phase II plus one standard deviation in one or more of the three factors considered in the methodology developed by Task Force (TF) #1. It is the majority opinion of TF #1 that this represents a less than desirable overall industry compliance posture.

(2) NATI Phase I established an effective air carrier information data base that can be used as a model for future comparisons.

(3) The TF #1 guidelines and the methodology developed during the TF #1 evaluation provide a valid method for immediate evaluation of the air carrier industry. These guidelines and methodology can be used as an on-going program to effectively direct resources and work programs. All three rating factors are objective mathematical computations, based on the numbers and degrees of severity of adverse (unsatisfactory) findings contained in the field inspector's reports. These computations established rates and percentage factors that can be used to warn of an impending safety problem needing attention.

(4) Adoption of the NATI concept on a continuing basis, in TF #1's opinion, would utilize available FAA manpower in critical areas and provide for more effective surveillance, as dictated by information contained in a continually updated national data base.

(5) NATI concepts would also develop acceptable levels of carrier performance to indicate how frequently an air carrier should be inspected in specific areas, or with increased numbers, or in-depth inspections.

(6) Use of the NATI concept would provide better and more effective use of manpower and could detect trends in sufficient time to permit the FAA to be "pro-active" instead of "reactive."

(7) Use of the NATI concept would show the quantity and quality of the work of each office as well as that of individual inspectors. It would indicate weaknesses in performance, with corrections resulting in higher productivity and standards. It would identify personnel who were improperly trained, lacking in experience, improperly assigned, unable to make decisions, or not motivated to work. It could be used to identify and reward outstanding performance.

2. Industry Management and Voluntary Compliance with the FARs

(1) Managements of some air carriers are not fulfilling their statutory obligations to provide a compliance posture necessary to ensure a high degree of public safety. NATI Phase I and II inspections revealed, all too frequently, an inability or lack of motivation of the carriers' managements to exercise appropriate operational control and to ensure the airworthiness of their aircraft.

(2) FAA field inspectors are not initiating a sufficient number of enforcement actions to ensure that carrier management complies with the FARs.

THE FEDERAL AVIATION ADMINISTRATION

1. FAA Staffing

(1) FAA inspector staffing is inadequate to accommodate overall responsiveness and responsible certificate administration, and for sufficient surveillance activity, to ensure the desired level of safety in air transportation.

(2) If not dealt with, this situation contains an increasing potential for further safety compromises in the future.

2. Certificate Administration

(1) Inadequacies in the FAA work force are: Air carrier experience level, training, workload, supervision, utilization of resources, and expertise.

(2) FAA inspector staffing is inadequate to carry out its responsibility with regard to its certificate administration of the air carrier industry.

(3) The geographic area of responsibility concept is not effective.

3. Training

(1) Training of FAA inspector personnel is, in some instances, inadequate to prepare them for their assigned tasks.

4. FAA Hiring and Initial Training Practices

(1) The FAA's present hiring practices are not in all cases bringing into the organization the people with the experience and characteristics to develop into competent inspectors.

(2) Current FAA training is not adequately evaluating, screening, and developing newly-hired inspectors.

5. Quality/Legibility of Reports

(1) The time and resources being lost through the poor quality and/or illegibility of reports are significant. The tangible and intangible losses and potential effect on aviation safety are unacceptable.

(2) Personal accountability at all levels, especially from region downward, is inadequate.

(3) Standards of quality are not well-defined in some areas.

6. Standardization

(1) Lack of standardization within the FAA is a problem that is universally recognized by both the industry and the FAA.

(2) Policy and procedure as issued by Headquarters appear to be diluted and re-interpreted at all levels. This has aggravated existing problems and caused others, including variations in the quality of inspections.

Based on those conclusions, we offered a number of recommendations which have been summarized in a document that I would like to submit for the hearing record.

I welcome the opportunity to respond to any questions the members of the Subcommittee may have.

#

RECOMMENDATIONS

FROM

MEMORANDUM ON EVALUATION OF NATIONAL AIR TRANSPORTATION INSPECTION PROGRAM INSPECTION REPORTS

April 1985

IV. THE AIR TRANSPORTATION INDUSTRY - TF #1 FINDINGS

1. Industry Compliance Posture

Recommendations:

The FAA should:

(1) Establish an information data base similar to the one obtained from the NATI Program, on an ongoing basis, at a central location, to initiate a national system for evaluation and control of surveillance work efforts.

(2) Refine the Task Force printed guidelines to ensure that all inspection reports are entered into a computer system. Select and refine existing inspection and report forms to ensure they indicate the system integrity of an air carrier. Issue these refined guidelines as a directive for guidance and standardization of the centralized surveillance program.

2. Industry Management and Voluntary Compliance with the FARs

Recommendations:

(1) FAA Headquarters should remind all air carrier management officials of their obligation to maintain a positive compliance posture and to direct field and regional offices to take aggressive enforcement action when air carrier management fails to fulfill its obligations to meet the safety standards.

(2) An effort should be initiated by the FAA field inspectors to conduct routine surveillance and inspection observances as warranted.

(3) The Regional Counsel should support the field inspectors' enforcement actions vigorously and in a timely manner.

V. THE FEDERAL AVIATION ADMINISTRATION - TF #1 FINDINGS

1. FAA Staffing

Recommendations:

The FAA inspectors staff should be augmented with qualified personnel, to the extent necessary to provide for safety in air transportation.

2. Certificate Administration

Recommendations:

(1) One immediate approach to correcting the aforementioned items has already been initiated by FAA Aviation Standards (AVS), which includes implementing the airworthiness certification and surveillance refresher seminar, and the Principal Operations Inspectors (POIs) training course. Both courses emphasize the Principal Inspector's certificate administration responsibilities. These courses should be refined as necessary and continued indefinitely as needed.

(2) The FAA should revise its hiring standards to obtain inspectors with better experience and background and initiate a more stringent screening process. (FAA hiring and initial training practices are addressed elsewhere in this report.)

(3) The FAA should increase its present inspector work force, selecting new staff from well-qualified, highly experienced applicants.

(4) The FAA should discontinue the present geographic area concept. In its place, it should use a system of specific, written work requests issued by the CHDO to the appropriately located district offices.

3. Training

Recommendations:

(1) The FAA should establish and keep current an Academy course in FAR 135 and FAR 121 air carrier certification, involving "hands-on" experience in all facets of the process.

(2) A parallel course should be developed on the continuing inspection and surveillance of carriers.

(3) The resident course material should be used to develop both an extension course and a structured District Office on-the-job training (OJT) course, to reach as many inspectors as possible in the shortest time.

(4) The FAA should utilize, to the maximum extent possible, that state-of-the-art technical training that is available only in the industry. This would include pilot training in newer aircraft, and airworthiness and avionics training in new techniques and procedures in subject areas the Academy is not prepared to teach.

4. FAA Hiring and Initial Training Practices

Recommendations:

(1) The FAA, and if necessary, the DOT, should take steps to upwardly revise the hiring standards for the GS-1825 series positions.

(2) The indoctrination training courses should be used as a management tool for screening new hires, and for identifying personnel with leadership and managerial potential.

(3) Greater and more positive emphasis should be placed on the 90-day evaluation period of new hires, which is designed to retain only the most potentially effective inspectors. Substandard inspectors should be eliminated at that point.

5. Quality/Legibility of Reports

Recommendations:

(1) The FAA should continue and intensify its efforts to augment and improve inspector training and education, as well as provide guidance to field personnel.

(2) Standards should be clarified and accountability for work products should be strengthened.

6. Standardization

Recommendations:

(1) An Aviation Standards Central Office should be established with direct line authority from the Associate Administrator to the District Offices.

Senator NUNN. Our next witness is Mr. Anthony J. Broderick, Associate Administrator for Aviation Standards, Federal Aviation Administration.

Mr. Broderick, do you have anyone with you that you would like to bring up who will be testifying?

Let me swear you in as we do all witnesses before the subcommittee. Hold up your right hand. Do you swear the testimony you will give before this subcommittee will be the truth, the whole truth and nothing but the truth, so help you God?

Mr. BRODERICK. I do.

TESTIMONY OF ANTHONY J. BRODERICK, ASSOCIATE ADMINISTRATOR FOR AVIATION STANDARDS, FEDERAL AVIATION ADMINISTRATION

Senator NUNN. Mr. Broderick, I know you have been here and have been listening to some of these rather disturbing recitations by witnesses in the last couple of hearings. You have a prepared statement, I believe. You can go ahead and present that as you see fit.

[At this point, Senator Roth entered the hearing room.]

Mr. BRODERICK. Thank you, Mr. Chairman. I am pleased to appear before the subcommittee today to discuss various aviation issues with you. You have asked me to describe in a brief statement the kinds of challenges I see which are facing the FAA and the airline industry. I would be pleased to do that.

My view of where the FAA needs to focus additional effort and attention is based on a significant amount of internal review and analysis of the agency performed over the last 2 years through a variety of efforts, including the National Air Transportation Inspection Program or the NATI Program, a part of which was an evaluation of the NATI data conducted as background for the NATI final report that has come to be known as the retired inspectors report, the Secretary of Transportation's Safety and Review Task Force, the General Aviation Safety Audit, and FAA Project SAFE, which seeks to pull together a variety of actions into one manageable program.

I believe we have achieved a very good understanding of what efforts need to be taken to improve the overall quality and efficiency of our safety efforts. I would like to take a few moments to describe where we see the need to focus our efforts and what our plans are to do so.

Before discussing what I see as areas in need of further emphasis, however, I believe it is important to highlight for you the aviation environment within which the FAA is working. Our airspace system serves some 325 scheduled airline operators who use more than 550 airports and have enplaned more than 300 million passengers each year. More than 200,000 aircraft use our Nation's airways. Over 4,000 of these aircraft are operated by scheduled air carriers.

There are about 1,200 pilot schools and over 150 maintenance technician schools. Over 700,000 pilots are active in our airspace, and more than 100,000 mechanics are certified to work on aircraft.

There are nearly 4,500 repair stations certificated by the FAA. The FAA's responsibilities touch on each of these areas, as well as on operating and maintaining the most sophisticated and busiest air traffic control system in the world. The safety record achieved over time by the United States indicates convincingly that the FAA has been very successful in fulfilling these varied responsibilities, though there are areas where we recognize we need to do more.

Perhaps our key conclusion from the reviews that we conducted was that the largest impeidment to performing the appropriate amount and kind of safety surveillance of the industry was the inadequate staffing level of our aviation safety inspector work force. The number of safety inspectors had eroded over time, and, with increasing work resulting from deregulation, a workload imbalance had resulted.

As an initial step toward correcting that imbalance, the Secretary of Transportation authorized the FAA to hire an additional 166 safety inspectors in fiscal year 1984. Subsequently, we performed more detailed analyses of what our requirements were and recommended that the inspector work force be increased by an additional 500 people.

The Secretary agreed with this recommendation last September, and we fully expect to achieve this goal of increased staff levels over the next 3 fiscal years. We also completed a detailed functional evaluation of our field inspection activity, which will enable us in the future to link staffing requests to actual workload.

We also concluded that it was necessary to make improvements in the quality of training afforded our inspector work force, to assure their familiarity with practices of a deregulated airline industry and to improve their knowledge and understanding of FAA regulatory requirements and inspection techniques.

Our inspector support staff just this year completed its revision of the original indoctrination courses provided our newly hired inspectors at our academy in Oklahoma City, and that new training is now being provided. They are currently in the process of revising this program further to achieve additional improvements, including development of a complete 30-volume handbook series for our inspectors.

Moreover, as I noted earlier, we have been engaged in an extensive effort to delineate every function performed by our inspector work force to define what specific skills, knowledges, and abilities are needed to perform acceptably as an inspector. Through this comprehensive effort, we are seeking to redefine the duties of our inspector positions as needed, to improve our ability to match people with the job and to improve our delivery of the tools they need to do their jobs.

Before going further, Mr. Chairman, I should note I have great confidence in our current inspector work force, but that I also recognize that it has proven extraordinarily difficult for them to do the job they would like to do and to remain current in their knowledge of all facets of their jobs given the heavy workload that is facing them.

Increasing the numbers of inspectors and support personnel available to us, along with increasing the skills through better training of that work force, will provide significant help to us in increasing our surveillance capabilities, and, in my view, represents the single most important step we in the FAA can make toward enhancing the quality of our safety efforts.

A recurring theme of Administrator Engen's has been the need to increase standardization within the FAA. In our analyses of the agency's operations, we have concluded that standardization has, indeed, been lacking. The decentralization of authority had gone too far. We have found inconsistencies in the application of our regulations from one office to another and sometimes with respect to complex areas of our regulatory program, even from one inspector to another within the same office.

Further, with respect to the decentralized approach to surveillance activities conducted in the field, there has not been sufficient central program direction given to our overall agency surveillance centers, defining areas where to focus increased surveillance and specifying general levels of surveillance needed to provide adequate coverage of the aviation industry.

We have a variety of activities underway to achieve greater standardization. We have already completed and furnished to our field offices a comprehensive surveillance work program to be followed this fiscal year in all regions. That program, for the first time, identifies, by type of inspection, the minimum numbers of inspections which should be conducted annually for each operator and by each office throughout the country.

Further, we have established a list of detailed, in-depth inspections to be accomplished by teams of FAA inspectors. In addition to our on-going surveillance program, all major air carriers will be subjected to detailed, in-depth operations and maintenance inspections on about a 2- or 3-year cycle. Additional one-time special focus inspections have also been scheduled for engine repair facilities and overseas military charter operations this year.

To ensure greater standardization in the application of our regulatory requirements, we are revising the entire set of internal handbooks used by our inspector work force to provide more detailed guidance to them in performing their jobs and will also increase our efforts to identify and change out-of-date regulations and supporting guidance materials.

There are a variety of other efforts we are undertaking to achieve greater standardization, and I would be be pleased to elaborate on them at your request. The ones I have just outlined here are illustrative of the kinds of efforts we are making across the board within our flight standards organization. This is a time of dramatic change for us, and our work force truly welcomes the opportunity we have been given by Secretary Dole and Administrator Engen to bring about these needed improvements.

Another area in which we have recognized the need for added effort has several aspects to it. We need to do a better job of evaluating ourselves, the quality of our overall surveillance, and follow-up efforts. We need to assure that there is adequate followthrough in correcting problems that are found through our surveillance efforts. When we find evidence or indications that a given type of problem is occurring too frequently, we need an improved centralized management system that facilitates the collection and dissemination of that key information. As I will briefly describe, we have programs in place that address these needs.

In terms of evaluating our efforts, we have hired a manager to develop a staff reporting to the Director of Flight Standards who will be resspponsible for monitoring the efficiency of our flight standards programs and the guidance we are issuing to the field. This effort will be fully functional by this June. The staff will also be responsible for programs to monitor industry trends and changes in order that FAA tracking and surveillance programs can be altered, as necessary, to track and accommodate changes in the work environment.

With respect to our ability to assure that adequate followup is taking place throughout this system, that will be enhanced both by our new evaluation system, which will assess our effectivenss in this area, and by the further implementation of automated management information systems.

We have been working for a number of years to fully develop and implement the system referred to as the Aviation System Analysis System or ASAS.

Through the automation provided by this system, we expect not only to increase the productivity of our inspector workforce, but to provide a national data base of near real-time information concerning, among other things, inspections of operators and enforcement histories. This will permit immediate access to significant information without regard to geographical or jurisdictional boundaries and will permit management at all levels in the FAA to evaluate the safety and effectiveness of our programs.

We have recently completed the implementation of 12 national ASAS software subsystems. Over the next year, we will continue software system development activities, intensify our efforts in long-range architecture planning, investigate more effective training methods for the use of this system and place more emphasis on our planning and use of human resources throughout this program.

I have already addressed some elements associated with the management of our human resources, which are our most important resource within the FAA. We thought it was worthwhile, nevertheless, to set this out as a separate area needing further efforts on our part. In the FAA, although we work with a tremendous amount of sophisticated equipment and are involved with many issues at the leading edge of technology, we simply cannot accomplish our jobs without people.

I mentioned earlier that our safety inspectors have been saddled with an increased workload, an intense workload. We are working to correct that imbalance. We are also taking steps to assure that our workforce is adequately trained and prepared to deal with all the requirements of their positions.

As I have also noted, we intend to better define those requirements and then track with what those position requirements should be so that we are not asking people to perform tasks for which they are not adequately prepared. I believe we also need to do more to support the Administrator's clear efforts to assure our inspector workforce that they will be supported by higher level managment for taking prompt and, if need be, tough action against operators who violate our regulations.

Administrator Engen has met with many inspectors to make this point, and indeed, our recent enforcement records should show clearly that efforts to deal strictly with safety violators will be supported at the highest levels. Nevertheless, we need to continue to get that message out to our work force to help assure that the employees on the spot will take necessary corrective action and not let areas in need of improvement go unattended.

You also asked me to briefly indicate what problem areas we see in the industry. Deregulation of economic constraints on entry into the airline business has produced major changes in our workload environment. This has been especially so and came as somewhat of a surprise to most industry observers in airlines which operate large aircraft. Many of these new operators came well equipped to deal with the high public responsibility that comes with providing common carriage by air.

Unfortunately, some did not come so well equipped. Perhaps the biggest single problem our inspector work force has faced is the demand which was suddenly thrust upon them to explain the rules and regulations and accepted practices to the management of many new entrants. The initial certification of these carriers and the ongoing management of those certificates by our inspectors has proven to be extremely labor intensive. Innovative ways of doing business have also provided difficulties. The proliferation of contract maintenance, for example, has been difficult to deal with and has also caused a large workload. We had to educate inspectors to the new ways of doing business and to alert airline management to the complexities and problems that such innovation could create.

The dynamics of the industry, while providing an economic benefit to consumers, have caused an added workload for the FAA and a need to adjust to new ways of doing business. The numbers of new entrants have created additional workload for us, both in terms of initial certification and ongoing surveillance.

Further, the relative ease today to changing route structures, contrasted with the relative inflexibility of the former economic regulatory regime, means that we need to continue to adjust to industry changes in conducting an effective surveillance program. This has not always proven easy, but it is a problem for us to manage, not a problem of the industry.

The added inspector work force will help us to deal with this issue. In the interim, we are working to better balance our efforts by assuring we are accomplishing the most important surveillance and inspection work before addressing certification work and related activities.

I believe it is also worth expanding upon a point we have noted above, again, not a problem with the industry, but one we need to recognize better within the FAA to enable us to address it by adjusting our practices as necessary. That change concerns the orientation of some of the key managment officials within industry.

Traditionally, much of the airline management consisted of individuals who rose through the ranks and who have been exposed over time to the aviation environment. Today, with the relative ease of creating a new airline operation, there are many individuals occupying to level positions whose experience within the industry is limited.

Some of these individuals may not possess a full awareness or appreciation of the comprehensive network of procedures and systems that must be in place and carefully managed to provide an appropriate safety evnivornment. In my view, there needs to be a greater educational process within industry to affirm to these individuals the need to assure that adequate and continuing management focus is directed toward all facets of their operations. Industry groups such as the Air Transport Association, the National Air Carrier Association and Regional Airlines Association are excellent sources of background information for airline management and we expect new airlines to take advantage of such efforts.

In the coming months, the FAA will be providing assistance to the Office of the Secretary of Transportation to assist OST in ensuring that those personnel being used by a new airlines in top level management positions affecting safety, such as directors of operations and maintenance, are fuly qualified before the airlines are found fit by OST to begin operations.

[At this point, Senator Gore entered the hearing room.]

Mr. BRODERICK. For our part, in our routine surveillance programs, we need to better identify early on those operators who are not stressing adequate management oversight of safety systems and procedures so we can take prompt and corrective actions and tailor our surveillance efforts to achieve greater oversight of their activities.

[At this point, Senator Gore withdrew from the hearing room.]

Mr. BRODERICK. This, again, is an area where the current programs we are pursuing in staffing, standardization, evaluation, and management information systems can only better our ability to respond to this kind of change in the operating environment.

Before closing, Mr. Chairman, I want to observe that while there are areas in which we recognize the need for further improvements, we have comprehensive programs which accomplish those objectives. Our air transportation system, by any measure, is the safest and most efficient in the world today. Through our current efforts, we intend to make it even better.

I am ready for questions, Senator.

Chairman ROTH. Thank you, Mr. Broderick. I do want to publicly say that I appreciate the fact that the Secretary of Transportation has taken, I think, a number of strong initiatives, valued initiatives to determine the status of FAA, that these efforts are valuable and, hopefully, will bring about the kind of safety records we want.

I do want to go to some of the specifics. I think you were here earlier today. Some very serious allegations have been made with respect to Continental. As you are well aware, one of these allegations was that the reports were very substantially edited with respect to substance; that the report was put in deep freeze for 6 months; that there was no followthrough with respect to enforcement.

I would like to have you tell what your position is with respect to each of these charges, and I think they are serious ones, and why it occurred; who was responsible for the rewriting, the deep freeze and the failure to take action. I also understand, and I would like your comment on this, that the FBI is investigating allegations concerning the Continental inspection report. Are you aware of this?

Mr. BRODERICK. I am aware of the fact that the FBI is conducting an investigation, sir, and that is literally all I'm aware of.

Chairman ROTH. Please proceed. Why was this report rewritten?

Mr. BRODERICK. I sincerely appreciate the opportunity to comment on these.

Let me start it at—give kind of a chronological explanation of what happened, as I see it, and what we were doing over 1984 with the report and focus in a little bit on the IOE check airman issue that Mr. Langdon spoke of earlier.

You have, for the record, the instructions that were given to the team in preparation, for preparation of this report. As Mr. Langdon indicated, I believe this was the first time that he had participated in indepth inspection and report-writing like this. The purpose of this report was to set forth the U.S. Government's view of Continental Airlines' compliance with the Federal Aviation regulations.

The purpose of the report was to document, in an evidentary sense, although we are an administrative agency, findings of noncompliance with the regulations and cite regulations which it was alleged were violated. The report that was—first report that I saw sometime, I believe, in March 1984, did that. But it went beyond that, in that there was an awful lot of material that was clearly and explicitly so stated, personal opinion.

It was not necessarily wrong, but it was not necessarily substantiated by facts. I conferred with counsel here in Washington and requested the senior management at the Western Pacific region, the deputy director at that time, specifically, who was in charge, as the director was on travel, I requested that they review this report and remove any material that was unwarranted generalization or unsubstantiated opinion, not supported by facts in the report.

They did so. It was my understanding at the time that that was a team effort. I learn now that apparently it was not.

When I saw the report a second time, that is, the final report, the first thing I really looked at was had they changed any findings; had they changed any recommendations; had they changed any allegations of noncompliance with any of the Federal Aviation regulations. The answer is "No."

That report comes in two volumes. Volume 1 is the volume that we have been talking about. It contains findings, a discussion of the findings and some recommendations. Volume 2 takes those findings and lists all the regulations that were alleged to have been violated, all of the findings involving alleged violation and all of the exhibits to back those up.

Volume 2 wasn't changed at all, not a single bit. It is the discussion part of the findings in volume 1 that were changed. Frankly, I don't see that; since the objective of the report was to achieve a determination on a item-by-item basis of compliance of Continental Airlines with the Federal Aviation regulations, I did not view that as a watering down of the report. The 20 recommendations for enforcement action that were discussed this morning were, in fact, removed from volume 1 but left completely standing in volume 2.

There was not, as I say, to the best of my knowledge, not a single word in volume 2 that was changed, and that is the substantive part of the material.

Let me, then, go on, sir.

Chairman ROTH. Mr. Broderick, could I just interrupt for a minute? Could you give us a copy of volume 2? It is my understanding that the subcommittee has not been supplied with volume 2.

Mr. BRODERICK. I'm sorry if that is true. It was my understanding that they had copies of both the original and the—let's say the draft report and the final report, and if you look at the last 10 pages, perhaps, of the draft report, that should be volume 2 without the voluminous attachments which form the materials. If it's not, we will be happy to supply it for the record.

Senator NUNN. Mr. Chairman, I think we have that.

Chairman ROTH. Do we have that?

Mr. BRODERICK. Yes; I believe the date of the second volume, I mean, of the second version of the report, the final report, was stamped April 24, approximately.

Senator GLENN. Mr. Chairman, I am getting a little confused on which report is what, here. Which one do we have? Is that just one?

Chairman ROTH. We have a copy of the draft report here.

Mr. BRODERICK. Which is, I believe, both volumes 1 and 2; is that not correct, sir?

Senator NUNN. We have got that. We have also got the changes.

Chairman ROTH. That is correct. We have got volume 1, volume 2 and the changes.

Mr. BRODERICK. And volume 2 is identical to both copies, in both versions of the report and of course, the supporting evidence is the same.

Anyway, that was in April 1984. That report had been, as explained by the inspectors early this morning, had been debriefed or gone over with Continental, and I am not sure of the date, but at some time, certainly, prior to May 22 or 23, that report was provided to Continental Airlines by May 22 or 23, and I'm not sure of the exact date. They provided a voluminous point-by-point response to every single finding in the report. It was about 6 inches high or 4 inches high, and again, if the committee staff hasn't got that, we will be happy to supply that for the record. But clearly, Continental at that time had that report.

Senator NUNN. When was that?

Mr. BRODERICK. I believe it was either the 22d or the 23d of May 1984, sir. That is the Continental response, their first written response to allegations contained therein.

Now, in June 1984, the Administrator and I testified before the House Government Operations Subcommittee on Government Activities.

Chairman ROTH. Would you supply the Continental response to the subcommittee?

Mr. BRODERICK. Yes, we certainly can. It is quite voluminous, but we would be happy to make a copy available.

Chairman ROTH. Or at least make it available.

Mr. BRODERICK. Yes.

In June, we testified before the House Government Operations Subcommittee on the subject of Continental Airlines, and we explored in great detail a number of things that we have heard about this morning. But there is one thing that is, I think, important to recognize, and that is, we had agreed with the committee staff and so stated and it is clearly stated in the record that we were not going to discuss subjects of ongoing enforcement action.

When, in fact, the question was raised for the reecord in that hearing about the check airman finding, we supplied an answer to that committee in writing, and it was published in the committee report. As a matter of fact, I would just like to read a couple of sentences from it to show that back in June 1984, we had clearly accepted the technical position that Mr. Langdon espoused here this morning.

"What did occur in this alleged violation was a mistinterpretation of FAA requirements." I am quoting, I'm sorry, from the subcommittee's report, and I will be happy to provide this to the record.

Senator NUNN. What page number?

Mr. BRODERICK. Page 511 of a report entitled "Aviation Safety Management, Continental Airlines Management, a Case Study." It says:

> What did occur was a misinterpretation of FAA requirements concerning check pilots and check airmen in which, for a number of years, Continental had been using check pilots to perform check pilots of initial line item experience, which is a function reserved for check airmen.
>
> When a regional flight standards official and the Los Angeles official confirmed with Washington headquarters the appropriate interpretation of the FAA's regulations, Continental was appraised that this practice, which had been going on for years, was not correct. All corrective action was taken within 30 days.

The point, I guess, I am trying to make by that is that this is not something, not a finding that we were in any way reluctant to discuss or had a technical disagreement with Mr. Langdon.

The final point I would like to make is the question about whether or not we had in any way protected the report or hidden the report from people. As I said, what we had agreed with the House subcommittee staff and committee clearly that we would not get involved in matters that were ongoing enforcement issues. We would only deal with closed enforcement issues. When, in December, in response to a Freedom of Information Act request, we released that report, because it was now deemed by counsel in the regional office in the Western Pacific region that it was appropriate to release that report, we got a letter from the chairwoman of that subcommittee asking why we had, in fact, hidden this report and we explained what I have just explained to you in that letter, and I would be happy to give you a copy of the inquiry and our response, and I believe that it was satisfactorily dealt with at that time.

That was in December, her letter to us was in December 1984 and our answer was dated January 1985.[1]

Chairman ROTH. My time is up.

Senator Nunn.

---

[1] The letter to was marked exhibit No. 20 and may be found on p. 384.

Senator NUNN. Thank you, Mr. Chairman. Mr. Broderick, I have here a set of instructions dated February 3, 1984, and this is from Mr. Clyde DeHart, Jr., to the inspection team on this Continental Airlines inspection.

[At the point, Senator Cohen entered the hearing room.]

Senator NUNN. Was Mr. DeHart the manager of that effort?

Mr. BRODERICK. He was at that time, sir, the manager of the Flight Standards Division.

Senator NUNN. Would his instructions to the team be appropriate instructions? Would he have had that authority?

Mr. BRODERICK. Oh, yes, sir. It was, in fact, an inspection that either he had requested or accepted upon the request of one of his subordinates.

Senator NUNN. Just reading the first paragraph here, he says he was organizing an inspection team to conduct an inspection on the safety analysis of Continental Airlines, Inc.

> This analysis will be of the scope and degree necessary to permit an accurate appraisal of the carrier's operational capability and an evaluation of any discrepancies, deficiencies in compliance, together with recommedations for corrective action.

Is that accurate?

Mr. BRODERICK. Yes, sir.

Senator NUNN. If those were instructions, that seems to me to be very broad. What are you saying was in this report that shouldn't have been in there?

Mr. BRODERICK. Sir, those were—in fact, that is the cover page, as I have it in my document here, to a detailed set of the inspection plan for Continental Airlines, and I would be happy to supply this for the record.

Senator NUNN. We have got that.

Mr. BRODERICK. They very thoroughly go through the entire inspection, what is expected of people, and in particular, how you analyze the report and what the contents should be. Basically, if you—the problem that I had with the contents of the initial draft of the report was that it was not in accordance with the instructions on page 6.

This is a factual, objective report, not an individual inspector's report providing his opinions. Those opinions may be valid, but they also may not be valid.

Senator NUNN. Well, on page 6 right here, I am reading page 6, it says,

> Corrective action report. The investigation team shall prepare a written report of the corrective action required as a result of the investigation. The report should provide a discussion of any deficiencies in adequate detail to be readily understood by all who may be required to take corrective actions. Where necessary, to provide clarity, specific examples and evidence should be provided.
>
> The report shall provide sections on findings, discussions, recommend corrective action, conclusions or whatever is appropriate.

How could you say that they go beyond the instructions when you say "all or whatever is appropriate." That is an open invitation for whatever the particular team may believe is appropriate to the consideration of safety.

Mr. BRODERICK. Sir, in section 3, let me just read what I believe would be appropriate.

> Unsatisfactory findings should be brief, factual statements made as a result of the examining data relating to a system which defines the defects in the operations programs, systems, or procedures,

and then it goes on to say,

> Avoid the use of words that imply all-inclusive situations such as "the training programs are inadequate," statements such as 'the operator is in non-compliance with FAR 121.0' should not be used as a finding.

It is that kind of material, not exactly those words, but that kind of material that I noted in scanning the original draft of the report. I didn't have, and I must say, I didn't have any specific set of instructions to "take this out, take that out." I just said: Look, compare this report to the instructions provided the team, and please reconsider it in light of the fact that there appears to be a lot of material that is specifically said not to be there.

Senator **Nunn**. When are you saying that the FAA turned this report over, the deleted report, the final report, when are you saying you turned it over to Continental?

Mr. **Broderick**. Sir, I don't have the exact date. I can get that for the record and will be happy to do so. I know it must have been, obviously, before May 22 or 23, because it's actually reproduced as part of—it is interwoven into the entire Continental response.

Senator **Nunn**. The deleted report or the initial report?

Mr. **Broderick**. The final report, the one dated April 24, so it would be before April.

Senator **Nunn**. You are saying it is not true that that report sat in the safe for 6 months with no action.

Mr. **Broderick**. Yes, sir; it couldn't have.

Senator **Nunn**. How could that have happened if you are saying by May? I thought the initial instructions were February 1984 and you are saying Continental responded in May 1984, aren't you?

Mr. **Broderick**. The inspection wasn't completed until March. The final report is dated—I believe it is April 20 or April 24. I don't have copies in front of me.

Senator **Nunn**. When are you sayng Continental responded?

Mr. **Broderick**. By approximately May 22.

Senator **Nunn**. How could the report have sat in the safe for 6 months?

Mr. **Broderick**. I am saying I don't understand how it could have.

Senator **Nunn**. It is true, you are saying.

Mr. **Broderick**. At least one copy was delivered to Continental, and I also would say, sir, that we had copies here in Washington.

Senator **Nunn**. If you gave the report to Continental in May, why didn't you tell the House of Representatives subcommittee that was looking into this in June 1984?

Mr. **Broderick**. A, it never came up in the hearing; but B, the reason it didn't come up in the hearing, I think, is because our regional counsel had determined that there were a number of enforcement actions to be taken as a result of that report. We had discussed this with the committee staff.

We had—you must remember that we were conducting a massive inspection of Continental Airlines at that time all over the country. We were having hundreds of violations reported to us by the Air Line Pilots Association. We had an awful lot of grounds to cover.

That was a small part of the Continental Airlines picture at that time.

Senator NUNN. Excuse me. You say the enforcement actions were going to be taken and therefore you didn't think it was appropriate to notify the House of Representatives when they were having a hearing on the safety of Continental Airlines. What enforcement actions were taken? You deleted all the enforcement actions; that was what you deleted.

Mr. BRODERICK. No, sir. That is the point. We didn't delete.

Senator NUNN. It sure is.

Mr. BRODERICK. There is not a single—an enforcement action is only taken when you allege violation of a Federal Aviation Regulation, and not a single one of those allegations or a violation of a regulation was taken out of that report. The word—and it is almost a semantic discussion. The word in a section in volume 1 that says enforcement action is recommended, and that was deleted, and it was, in fact, redundant. There is not a single one of those that was deleted from volume 1 that was taken out of volume 2. It's really a question of organization of the report in accordance with the instructions given.

Senator COHEN. Would the Senator yield?

Senator NUNN. Yes.

Senator COHEN. Apparently, the staff has just gotten a copy of volume 2 today. So they apparently had two separate volumes that were presented. The staff got volume 2 just now.

Mr. BRODERICK. I didn't think that is what I heard.

Chairman ROTH. My understanding is different.

Mr. RINZEL. Some of my staff were advised by some of your staff, Mr. Borderick, that this document is being supplied to us for the first time today, because we hadn't requested it before, and I do think that we have asked for all the documents related to the investigation of Continental Airlines. I think our request included this document.

Mr. BRODERICK. Did I misunderstand something earlier when the chairman looked at the back of the draft report that you have, the stamped draft? Is there no volume 2 in the back of that?

Mr. RINZEL. There is not.

Senator GLENN. I just was handed a copy now for the first time.

Mr. BRODERICK. OK.

Chairman ROTH. I don't think we can spend the next half hour arguing. I did make the statement that we had not received volume 2; that Senator Nunn thought the minority had a copy of it.

Upon investigation, we find that we did not receive it.

Senator NUNN. That is right.

Chairman ROTH. Isn't that correct?

Senator NUNN. That is correct. That is correct.

Chairman ROTH. I think the point is well taken that Mr. Rinzel says we are not in this to play Mickey Mouse games. When we make a request, we expect full disclosure. We don't expect to have to ask specifically and precisely for something. I am concerned about the responsiveness. But let's proceed with the questioning.

Senator NUNN. Let me go ahead, because I am getting more and more perplexed here. Mr. Broderick, I understand that you reviewed the draft Continental report sometime in March of 1984; is that right?

Mr. **Broderick**. Yes, sir.

Senator **Nunn**. Did you discuss its contents with FAA Administrator Engen?

Mr. **Broderick**. At that time, I'm not sure. Sometime between then and April, we had the final report, I am sure I did.

Senator **Nunn**. Did you discuss the report with anyone associated with Continental Airlines at that time?

Mr. **Broderick**. I would have had no occasion to do so.

Senator **Nunn**. The answer is "no"?

Mr. **Broderick**. No.

Senator **Nunn**. In June 1984, you accompanied Mr. Engen in his appearance before the Activities and Transportation Subcommittee of the House Committee on Government Operations. Mr. McClure, the Director of Western Pacific region, also accompanied you. The subject of that hearing was "Aviation Safety Management, Continental Airlines, A Case Study." Is that right?

Mr. **Broderick**. Yes, sir.

Broderick. **Nunn**. Why did you or Mr. Engen fail to advise that subcommittee of the critical findings against Continental contained in the 1984 special inspection report?

Mr. **Broderick**. I think, in fact, if we go back through the record of that committee, we will find that we did talk about the fact that we had just completed an inspection of Continental; that we had found discrepancies, but that we hadn't concluded that they were safe to operate, to continue operations.

Senator **Nunn**. Of course, that wasn't what the inspection team found. They found that there were all sorts of enforcement actions that needed to be taken and you had not taken those enforcement actions at that time, and I assume no corrective action had been taken. Let me just give you the direct question and answer here.

Mr. Engen was asked to comment on allegations made by striking Continental pilots that the airline was unsafe. He testified as follows:

> Charges had been made that Continental is unsafe. I have to disagree. Our surveillance of Continental has satisfied me that Continental has provided and continues to provide safe service to the traveling public. Continental Airlines is as safe today as it was before, from our inspections. It is as safe today as any other airline in the system out there by our judgment.

[Excerpts from previously mentioned hearing follow:]

Mr. **Engen**. I was not present at the hearing yesterday before the subcommittee. I asked members of my staff to attend and to brief me generally on the issues which were raised. Given the seriousness of the issues raised, I particularly welcome the opportunity to be here today. I hope that I can provide, perhaps, some balance to the information provided to the subcommittee and to the public.

Before going any further, let me address one subject which is clearly on everyone's mind. Charges have been made that Continental is unsafe. I disagree. Our surveillance of Continental has satisfied me that Continental has provided, and continues to provide, safe service to the traveling public. If I thought otherwise, let me make it perfectly clear that I would not hestitate to take whatever action was necessary to ground them or to bring them into compliance.

* * * * * * *

Mr. **Engen**. Mr. McCandless, I am never satisfied with my performance, or my organizational performance, and we always must try to improve.

I am satisfied that Continental Airlines is safe in its operations. I am satisfied that we have—we are keeping the issue open and looking down into Continental on a day-to-day basis, and I am satisfied that Continental is as comparable in its operational practices as other airlines out there.

But I want to say that I am never satisfied with my performance, and I continually strive to do better, to plug the holes, to learn, profit by experience, improve our action. I think we need to be more responsive, and I am pressing very hard on that.

Senator NUNN. Given the report that we have heard this morning, do you believe that is an accurate statement?

Mr. BRODERICK. Yes, I do, sir, and I don't think that the inspectors disagreed with that. Discrepancies do not constitute an unsafe airline. Now, that is not to minimize the importance of compliance with every single regulation.

Senator NUNN. The report says here that, again, refreshing my recollection, quoting from the report that you are saying indicated there was no safety problem.

The report found that Continental Airlines did not provide dispatchers with any forecast weather maps in certain areas of the South Pacific. Report noted that there was a discrepancy exceeding 2,000 miles where the dispatcher could be routing the flight into an area of severe or adverse weather and never know it, adding that the area in question was well known for severe thunderstorms.

Now, you don't think that has any bearing on the safety, a direct question asked to Mr. Engen in that subcommittee?

Mr. BRODERICK. It certainly does, sir, and my recollection tells me that my review of the followup action reports which started in April of 1984 indicate that that particular problem was corrected by April 1 before the report was even finalized.

Senator NUNN. Have you got some documentation of that?

Mr. BRODERICK. I can provide it to the record.

[The information referred to follows:]

U.S. Department
of Transportation

**Federal Aviation
Administration**

630 Independence Ave., S.W.
Washington, D.C. 20591

Received by
Subcommittee on Investigations

JUL 14 1986

JUL 14 1986

Susan Lebeaux, Esq.
Staff Counsel
Permanent Subcommittee on Investigations
Committee on Governmental Affairs
United States Senate
Washington, D.C. 20510

Dear Susan:

This is to supplement Administrator Engen's June 30 letter to Chairman Roth. Pursuant to Chairman Roth's letter, I am enclosing the requested correspondence between Administrator Engen and Chairwoman Collins of the House Subcommittee on Government Activities and Transportation. I have also enclosed page 354 of Continental Air Line's (CAL) May 22, 1984, report to the FAA. That page outlines the corrective action taken by CAL with respect to weather information in the South Pacific. As we agreed, I have not enclosed the full CAL report, which is approximately 500 pages, since we had earlier been advised by CAL officials that they were providing a copy directly to the Subcommittee.

These materials should fulfill your earlier request to the FAA. If there is anything more you need, please do not hesitate to call me.

Sincerely,

Bert Randall

Albert B. Randall
Assistant Chief Counsel
for Legislation

Enclosure

50 Years of Air Traffic Control Excellence
– A Standard for the World –

CARDISS COLLINS, ILL., CHAIRWOMAN
MAJOR R. OWENS, N.Y.
BARBARA BOXER, CALIF.
TOM LANTOS, CALIF.
GERALD KLECZKA, WIS.
ROBERT E. WISE JR., W. VA.

RAYMOND J. McGRATH, N.Y.
ALFRED A. (AL) McCANDLESS, CALIF.
DAN SCHAEFER, COLO.

(202) 225-[illegible]

NINETY-EIGHTH CONGRESS

Congreſs of the United States
House of Representatives
GOVERNMENT ACTIVITIES AND TRANSPORTATION
SUBCOMMITTEE
OF THE
COMMITTEE ON GOVERNMENT OPERATIONS
RAYBURN HOUSE OFFICE BUILDING, ROOM B-350-A-B
WASHINGTON, D.C. 20515

A841214006

84 DEC 14 AM 10: 35

December 7, 1984

The Honorable Donald D. Engen
Administrator
Federal Aviation Administration
800 Independence Avenue, S.W.
Washington, D.C. 20591

Dear Administrator Engen:

We were quite dismayed to learn in recent press accounts of an FAA report completed on April 20, dealing with safety violations at Continental Airlines.

At our Subcommittee hearings on June 13-14, 1984, no reference was made to the existence of the report by you or officials from the Western-Pacific Region. Obviously FAA personnel in the regional office and in Washington were aware of the completed report; yet no effort was made prior, during or after the hearing to add its contents to our record.

We are aware of the need for confidentiality of ongoing investigations. At the same time, it is evident that the April report was completed far in advance of our hearings. If higher level reviews were needed before its release to the Subcommittee, they also should have been completed after 60 days. If the review process is more time consuming, then we think an thorough overhaul of FAA procedures or additional manpower may be needed. The alternative is to allow continued airline operations in violation of Federal Air Regulations until the time consuming review is completed.

We would appreciate a prompt and complete explanation of the failure to discuss the report, as well as the final disposition of the cases and incidents discussed during the hearing. The published transcript is now available to assist you in following up on those incidents.

Thank you very much for your consideration.

Cardiss Collins
CARDISS COLLINS
Chairwoman

Ray McGrath
RAYMOND J. McGRATH
Ranking Member

Operations Findings
Item J - Dispatch

Finding #2

The Company presently does not provide the dispatcher with any forecast weather maps in certain areas of the South Pacific, therefore, the dispatcher connot be fully familiary with forecast weather on the route to be flown. This is contrary to FAR 121.599(a).

Response

Continental's current practice is to provide the pilot a complete weather package out of Honolulu, and the dispatcher has adequate but less than optimum information. The following new procedures will be implemented:

1. As of April 1, 1984, all pilot reports for the South Pacific (including other airlines) are automatically sent to the international dispatcher hourly.

2. South Pacific route forecasts (ROFORS) for an area bounded by the equator to 45S and from 145W to 145E are currently received (Exhibit J-2). This covers all routes on Continental's South Pacific operation.

Current practices were developed when Continental's office was in Los Angeles and additional charts and sequences were available through the Meterology Department. With the move to Houston and the elimination of Meterology, the area south of Nandi was lacking in optimum weather information. However, flight crews continued to receive required weather information on all flights.

Action:

Pilot reports are now received and arrangements have been made to receive route forecasts by June 1, 1984. Additionally, with the start-up to HNL-GUM service, significant route weather maps are available for this segment and we have increased our pilot reports and area forecasts for the entire Pacific operation.

JAN 15 1985

(AN IDENTICAL LETTER TO: Raymond J. McGrath)

The Honorable Cardiss Collins
Chairwoman, Subcommittee on Government
  Activities and Transportation
Committee on Government Operations
House of Representatives
Washington, D.C. 20515

Dear Madam Chairwoman:

This is in reply to your letter of December 7, 1984, which expressed concern about an FAA investigative evaluation of Continental Airlines and also requested a summary of the disposition of the cases and incidents mentioned at the June hearing before your Subcommittee.

First, let me respond to your concern that we did not discuss our investigative report on CAL during the hearing before your Subcommittee. I would like to assure you that there was no intent to withhold information from the Subcommittee. We worked closely with your staff before the hearing and sought to provide you and your staff with substantial information concerning our efforts to oversee CAL. Insofar as raising the subject matter of the report at the hearing is concerned, the findings contained in the report were investigative in nature, conceivably forming the basis for subsequent enforcement action against CAL, and a final course of action had not been decided upon. Before the hearing, our respective staffs agreed that only "closed," rather than pending, investigative actions would be covered at the hearing.

Let me take a moment to set forth the timing of the report. The drafting of the report was completed on April 20, 1984. As you know, the report contains several hundred pages. We briefed Continental on the information which formed the basis of the report and offered them an opportunity to submit any comments or data they felt we should have as we further assessed the contents of the report and considered the possibility of taking enforcement action against them. In a letter dated May 22, 1984, Continental responded to the information contained in the report. They provided a significant amount of data for us to review, and asked that their data be withheld from disclosure pursuant to the exemption of the Freedom of Information Act dealing with ongoing investigations.

The FAA was still in the process of reviewing Continental's extensive submission at the time of the Subcommittee's hearing. Thus, the process begun by our investigation of Continental was not closed at the time of the hearing, and it would have been premature to discuss an investigation which remained open. In fact, after reviewing the data submitted by Continental, FAA decided not to pursue an enforcement action against the airline.

The possibility that the tentative findings of a pending investigation might create a mistaken impression of the carrier's record, when, in fact, conclusion of that investigation might result in a decision that enforcement action was not warranted, is one of the key reasons why the FAA and the Subcommittee staff agreed to focus on closed investigations for purposes of the hearing. This approach is not unique to the Continental investigation. We are reluctant to raise or discuss any ongoing investigation and it is our practice not to do so--out of concern that an individual's or organization's reputation or record not be unduly tarnished, as well as to avoid prejudicing the outcome of any subsequent legal action we may take against that individual or organization.

One final point I would like to make concerning our investigative practices is that deficiencies found in a carrier's operations during the course of an investigation are brought to the carrier's attention immediately, so that corrective action can be taken at once. We do not let potentially unsafe practices continue while an investigative report is reviewed by FAA management or while we await the submission of explanatory data by the carrier. While review of such reports or submissions is clearly appropriate to determine whether enforcement action is warranted and, if so, the severity of the sanctions to be pursued by the agency, we share your concern that potential safety violations not be allowed to continue during the review process, and we do not allow that to happen.

In response to the second request in your letter, I am enclosing a brief summary of the disposition of the cases and incidents discussed during the hearing before your Subcommittee.

I hope you will find this letter responsive to your inquiry. I look forward this coming Congress to continuing the fine working relationship which has existed between our organizations during this past Congress. An identical letter has been sent to Ranking Member Raymond J. McGrath.

Sincerely,

Donald D. Engen

Enclosure

Continental Airlines Cases and Incidents

(1) ALPA reported that on November 23, 1983, CAL Flight 146, N66725, a Boeing 727-224, lost the #3 engine on takeoff. Federal Aviation Administration (FAA) investigation disclosed that the engine failure actually occurred on December 23, 1983. Engine failure was the result of routine turbine failure. The engine was changed. There was no violation of Federal Air Regulations. Thus no FAA action was taken.

(2) On November 23, 1983, CAL Flight 440 deviated from clearance (altitude) in the vicinity of New Orleans. Conflict with DAL Flight 709 resulted. The Southwest Regional Counsel's Office issued civil penalty letters to the captain and co-pilot of $2,000 and $1,000 respectively. Informal conferences were held on November 1, 1984. The Regional Counsel's Office sent follow-up letters on December 28, 1984, stating that FAA would not compromise the penalties stated in the original civil penalty letters.

(3) On December 28, 1983, CAL Flight 462, a Boeing 727-200, N79750, made a hard landing at LaGuardia Airport, New York, N.Y. An order suspending the captain's pilot certificate for 15 days was issued by the Western-Pacific Regional Counsel's Office on July 18, 1984. The pilot appealed to NTSB and the case is pending before the Board. No hearing has been set as yet. On October 23, 1984, the Regional Counsel's Office sent CAL a $6,000 civil penalty letter. The case is awaiting an informal conference requested by CAL.

(4) On November 18, 1983, CAL operated Flight 437, a DC-9, between Denver and Burbank and return, with the same flight crew. As a result, flight time limitations were violated by CAL. On June 26, 1984, a $1,000 civil penalty letter was sent to CAL. Negotiations between FAA and CAL concerning this matter are still pending.

(5) On November 9, 1983, CAL Flight 435, a DC-9, N3512T, landed on a taxiway at Stapleton International Airport, Denver, Colorado. On August 6, 1984, the Western-Pacific Regional Counsel's Office issued an order suspending the captain's airman certificate for 15 days. The certificate was surrendered, and the case is closed.

(6) On October 6, 1984, CAL Flight 311, a DC-9, N509T, landed at Burbank when the crew did not have the approach plate for the Lynxx One Arrival procedure used. On February 13, 1984, the Western-Pacific Regional Counsel's Office issued a $500 civil penalty letter to the captain. Following an informal conference and as a result of mitigating factors, the civil penalty letter was withdrawn on September 14, 1984. The mitigating factors were that the approach plate was just issued the day before the flight, air traffic control personnel provided the missing information, and safety was not affected.

Senator **Nunn**. Again, you didn't see any need to give the subcommittee any notice that that had been a report of Continental safety when the subject of the hearing was Continental safety?

Mr. **Broderick**. Yes, sir, but I think the question of a report never came up, and I certainly would never have denied it to that committee or to this one.

Senator **Nunn**. It sounds to me as if the committee is going to have to issue a set of 1,000 or 2,000 interrogatories to get a full disclosure when you testify. You don't think the subject was pertinent to that hearing when the report had been done by your own team and you had personal knowledge of it, and you don't think that was pertinent to a hearing because no one asked a specific question on it. To me that is an incredible answer.

Mr. **Broderick**. It wasn't that we didn't think the report was pertinent; the attorney in the Western Pacific region was using the report as a basis for enforcement action, which is the reason the report wasn't publicly released.

All of the results of that report were discussed with the committee. I mean, the fact that we had uncovered discrepancies at Continental was not—I mean, for example, I talked about the IOE check airman problem, which is one of the serious things that Mr. Langdon brought up.

Chairman **Roth**. Because of the time restraints, we better move on. Hopefully, we will get back to you.

Senator **Cohen**. I would yield.

Senator **Nunn**. Just one other question. In that hearing, that June 1984 hearing, the subcommittee had heard allegations that Continental had reduced training hours for personnel without any FAA approval in violation of the regulations. Continental representatives testified as saying, "Our syllabus hours are the same."

"They are under an FAA approved flight crew training manual," FAA Administrator Engen testified. "Continental has not proposed nor has the FAA approved any reductions in the training program for Continental Airline pilots except in the case of Omega Navigation System and that was on the B-727 which went from 30 hours to 24 hours, while the DC-10 and DC-9 was increased from 0 to 8 hours. Training is for nondomestic flight."

Continuing to quote, "Short answer, sir. There have been no changes in the requirement for training."

[An insert from the previously mentioned hearing follows:]

Mrs. **Collins**. ALPA has said that you have your pilots doing on-the-job training. I think that is a very serious statement. How do you address that, Mr. Onstad?

Mr. **Onstad**. I think that's very easily addressed. It is not true. The training programs at Continental Airlines today are the same as they were before, and as Mr. Hillman will be able to tell you, the level of experience today at Continental Airlines is far better than when most of the Continental pilots who are striking were trained in the 1967 spool-up and the 1977 spool-up. Dick?

Mr. **Hillman**. The training program—I was in the training department as a flight instructor in the 1977 era. We trained our pilots in those days under an FAA approved flight crew training manual. The training accomplished then is done exactly the same way it is done today, same numbers of hours in the classroom, in the cockpit procedures trainer, in the flight simulator, and in the aircraft.

I might add that the check airmen Captain Laughlin referred to were trained in 1977, I was one of them. On the 727, DC-10 program in Los Angeles, every single flight instructor that worked with Mr. Laughlin in those days, except one, is still working in the flight crew training department in Los Angeles. So it's the same check airmen that were trained in the 1970's.

Our syllabus hours, as I said, are the same. They're under an FAA approved flight crew training manual, just as they were in 1977.

Senator Nunn. In the report we had this morning, there were at least four findings in the report on reduced training hours of Continental without FAA approval. It seems to me that is directly conflicted by the testimony.

Mr. Broderick. No, sir. The context of that question was for the purposes of strike recovery, had there been reductions in training hours. I think you will find that that is exactly what the context was. We never denied, as in the question of the IOE check airman, that there were problems with some of the training programs at Continental Airlines, but those were not specifically related to the strike, and that was the context in which that question was asked.

There had been no special reduction in training hours for Continental Airlines for the purposes of strike recovery.

[An excerpt from the previously mentioned hearing follows:]

Mr. Engen. Mr. McCandless, let me hasten to say to you in a simple answer, no. I think we have all the authority that is required. We have an oversight committee. Excuse that term, but it is the National Transportation Safety Board, who can look at us at any time to insure that we are, in fact, doing what is right.

My priorities are that we should be visible and effective. We should be out there on the scene and be seen, and be doing things, showing no partiality in our judgment with the safety of the system, safety of that operator, safety of that pilot and his procedures, foremost in our minds.

Mr. McCandless. Thank you. Yesterday, I made notes in a number of locations. Yesterday, one of the testimonies had a number of areas that I felt would be of value to the committee for your comment. One dealt with what was referred to as "obvious changes in the training program." That was the terminology of the person who testified, and what she said, in so many words, that questions would be asked as to on whose authority were the training program requirements downgraded? On what basis for granting that change? What changes approved by the FAA prior to being instituted were? Were they unilateral and implemented, in this particular case, by the airline? Who trained the instructor? Was the syllabus approved? And they go on and on and on into the details of the training process.

Then we had testimony following that that said there was no change in the training program, if I understood the testimony correctly. Would you comment on what appears to be some kind of a conflict here?

Mr. Engen. Yes, sir, Mr. McCandless. Let me just say that Continental has not proposed, nor has the FAA approved, any reductions in the training program for Continental Airline pilots from the requirements which existed pre-strike, except in the case of Omega Navigation System, and that was on the B-727 which went from 30 to 24 hours, while the DC-10 and DC-9 Omega training was increased from 0 to 8 hours. Omega training is for non-domestic flights. Short answer, sir, there have been no changes in the requirements for training.

Senator Nunn. You are playing games with words, Mr. Broderick.

Mr. Broderick. I don't intend to, sir.

Senator Nunn. I think it is rather apparent. My time is up.

Chairman Roth. Senator Cohen?

Senator Cohen. Just to carry on in words games, what is the difference between discrepancy and violation? How many of them amount to discrepancies and violations in volume 2?

Mr. Broderick. A violation is a legal finding. It is a discrepancy which involves noncompliance with a Federal Aviation regulation, if substantiated, would be a violation of the regulations, sir.

Senator Cohen. In volume 2 of your findings, how many are discrepancies and how many, in your judgment, are violations?

Mr. **Broderick**. There are 21 alleged violations in there, and 30——

Senator **Cohen**. In volume 2, did you ever put in the recommended enforcement in any decision about enforcement in volume 2?

Mr. **Broderick**. It is required by our enforcement handbook that any report of an alleged noncompliance with the Federal Aviation regulations be treated as an enforcement action, and there are specific procedures to follow. So to me or to any FAA person, if you have a violation of the FAR, enforcement action is appropriate. That is the only thing that's appropriate.

Senator **Cohen**. If you have just a discrepancy, what is the course of action?

Mr. **Broderick**. You have to investigate to find out whether that discrepancy involves a violation of the regulations.

Senator **Cohen**. In looking over Mr. Alley's and Mr. Langdon's qualifications, is there anything in their background which would question their qualifications to conduct such an investigation?

Mr. **Broderick**. No, sir.

Senator **Cohen**. They were familiar with the subject matter?

Mr. **Broderick**. The only thing I would say is that this was the first inspection that Mr. Langdon had been involved in, in all those years at FAA.

Senator **Cohen**. Mr. Langdon said this morning, as part of his testimony, "After days of discussion among the team members, we concluded that the situation should not be permitted to continue even one more day—even one more day. We requested an immediate cessation of the illegal use of check airmen; however, the recommendation was rejected, apparently on the grounds that Washington headquarters personnel had already authorized a 30-day extension."

How do you explain that?

Mr. **Broderick**. I think that there was a disagreement between the people on that inspection team on the west coast, and the technical managers in the Western Pacific Region. They called Washington to ask us, if you will, to ask my staff to referee, if I can use that word, that disagreement.

My staff, in fact, sided with Langdon's interpretation of the regulations.

I think, you know, the business about 30 days was an appropriate amount of time, you have to look to the character of the violation, and specifically what would be gained and what was lost by not having that training.

Let me say one thing if I might, Senator. There is something that I think we need to recognize, and that is that the check airmen function is not something, in the case of new airline captains that we are talking about, that eliminates the need for the FAA presence that Senator Glenn talked about.

In fact, every single one of these airmen needed to get an FAA signoff before he was allowed to go past his point of 25 hours of operating experience.

Every single one of Continental's captains that we are talking about, that was observed by an improperly trained IOE check airman, was in fact also observed before going on the line, as it is called, by an FAA inspector.

Senator **Cohen**. On the first page of your letter to Mr. Langdon, you indicate that "concern was expressed by us that a number of statments in the draft report were not based on data contained therein."

Which statement did not contain supporting or substantive data?

Mr. **Broderick**. I wasn't specific, sir.

Senator **Cohen**. I know, and I want you to be.

Your statement is, "a number of statements in the draft report were not based on data contained therein." Which ones are based on data?

Mr. **Broderick**. Let me give you one example. Let me read one, it is in the draft report, it is item H, training records, flight attendants, and it is finding No. 1. Here is the recommendation:

> We would not presume to tell Continental how to run their company, and there is no regulatory basis for this suggestion. Nevertheless, the suggestion is offered that Continental management should consider placing the flight attendants under the control of the flight operations department.

Senator **Cohen**. That is a suggestion.

Mr. **Broderick**. That is a recommendation.

Senator **Cohen**. I am asking for the statements.

Mr. **Broderick**. I am sorry, sir. I had no problem with any of the findings. Not a single finding that I know of was changed. Every one of those findings was repeated from volume 1 to volume 2. It was only the discussion and the recommendations which are explanatory, and nothing more. There was not a single finding that I had a problem with, and I apologize for that misunderstanding.

Chairman **Roth**. Senator Glenn.

Senator **Glenn**. Thank you, Mr. Chairman.

Mr. Broderick, this is a little bit on the check airmen system. Is FAA still in favor of that, or do you think that we should go back to a more independent system?

I, frankly, don't think too much of the check airmen system myself. I think FAA should be giving independent checks like the old system. Many years ago, an inspector walked the ramp of the airline on occasion and said, "I am riding with you this time to check you," he had a check sheet, and that was it. There wasn't any fooling around about that.

The check the airmen system now, with airline personnel monitoring airline personnel, it is a buddy-buddy system that I don't particularly care for. Is FAA wedded to that system?

Mr. **Broderick**. No, sir, it is not now and it will not be as long as I am here an exclusively check airmen system. We do about 15,000 of those en route inspections every year where there is no notice. We walk into the cockpit of an airplane and say, "We are here to do a check."

Senator **Glenn**. This would be a regular check, this would not be a check airmen.

Mr. **Broderick**. This is a regular check ride to see what is going on in the cockpit, to observe the operation of the pilot, the copilot, and the flight engineer, if they are there. In addition to that, every initial turbo-jet type rating for airline pilots that is given by the FAA, and the hourly experience signoff is also given for captains by the FAA.

So I agree with your comment, and I think that the increased staffing will enable us to do more, not less, of that.

Senator **Glenn**. When you talk about the increase in staffing, I note, on page 3 of your testimony, "The Secretary agreed with this recommendation last September—this is the 500 additional—and we fully expect to achieve this goal of increased staffing levels over the next 3 fiscal years."

That is a long time down the road to me, and we are going to be flying the airlines of the United States without having enough inspection personnel. I come back to my question, but let me make another statement here, first, before I do.

Back when all of these budget cuts were underway, FAA took their cuts along with everybody else. I believe the figure was 2,014 inspectors back down to 1,400 at FAA. I know that FAA saluted smartly, acted like good soldiers and said publicly—I questioned this at the time—yes, we think that we can do our job with the decreased personnel.

Even though I doubted it, I couldn't fight for any personnel for FAA at that time because FAA said that they could get along without. I thought that it was preposterous at the time. Now we are trying to build back up here, and it is going to require 3 more years.

I would say that it is going to be 3 years before we have adequate regulation, adequate checking regulation of the airlines. I would stop deregulation, I wouldn't give another certificate if I were you until we get adequate people out there who can do the job that is expected. Do you agree with that or not?

Mr. **Broderick**. I do agree that we need to put certification as a second priority, and that is exactly what we have done. In fact, it is a third priority behind accident investigation, and surveillance.

For the first time, we now have a national work program that is centrally directed——

Senator **Glenn**. Do you plan to certify new carriers?

Mr. **Broderick**. If we have the capability, yes, sir.

Senator **Glenn**. You don't have the capability to oversee the ones you have.

Mr. **Broderick**. It depends on the local office.

Senator **Glenn**. It depends on FAA headquarters and what you tell them.

Mr. **Broderick**. We have specified minimum amounts of surveillance. The number of new entrants is fairly low right now. It is not nonexistent, but it is fairly low. I think the FAA clearly has the staffing augmentation on the way, and the resources available to do the job.

I think, had you put that question to me 4 years ago, I probably would have given you a different answer. But things are different now.

Senator **Glenn**. What happens in these next 3 years, when we have inadequate staff?

Mr. **Broderick**. As to the next 3 fiscal years, let me be precise. We have already absorbed the 166. We will be hiring 300 inspectors and support personnel this fiscal year, in the next 6 months. In fact, they will all be in training.

Senator **Glenn**. Everybody, including yourself, says that we are short of inspectors. You need more people, and we don't have them yet, but you are going to go out and certify more airlines.

I think that the FAA should make a public announcement and say, no more until we get our inspection staff up there. How can you not do that? Otherwise we are going to see people flying around in less than the safest condition which we can have.

Mr. **Broderick**. That would be true if we couldn't carry out the surveillance work.

Senator **Glenn**. But the inspectors are not there to do the surveillance.

Mr. **Broderick**. Let me just use an example.

Senator **Glenn**. I am with you. I am willing to fight. I am willing to fight harder for FAA inspectors than FAA was willing to fight for their own in 1981, I will tell you that. I don't recall any big fusses with Mr. Stockman and people like that when they were cutting you to ribbons.

Mr. **Broderick**. We, in fact, are hiring people. I won't say that we can't do it any faster than we are doing it, but significantly faster, we would have digestion problems trying to train them.

Senator **Glenn**. All I am trying to suggest is that we tailor the work force to the job to be done, to be safe. We don't have enough inspectors out there now. So let's tailor the workload to the number of inspectors, otherwise we are not going to be safe.

Mr. **Broderick**. That is exactly what we have done. We have set national program guidelines, which require minimum levels of surveillance, mandatory before the certification is done. The point is that the certification workload is in fact a small part, and surveillance is a part of it.

Senator **Glenn**. Yes; but the oversight goes beyond the certification. Certification is one thing, and operation and inspection is quite different.

Mr. **Broderick**. That is correct. Operation and inspection is part of surveillance.

Senator **Glenn**. We still lack the people to do that job out there in the numbers required to be absolutely safe with the number of airlines that we have out there.

Mr. **Broderick**. I don't think that we lack the people to do that job, if we do the priorities right, and if we support our people when pressure comes down on them to stop doing surveillance and start doing certification.

Senator **Glenn**. We have things like, I am sure you were briefed or you were here last week, Arrow Air. The oversight there was apparently dismal. Batch Air, down there, there were a lot of questions. You sent a lot of additional people down there to check on them. That investigation is still going on, of course.

It just seems to me that it is very prudent that we not expand more until we have absolutely the optimum number of people out there.

Mr. **Broderick**. I understand that, but let me say that I think the oversight on Arrow Air was poor before 1984. In 1984, 1985, and today, the oversight is excellent. We have hundreds of inspection reports. We have just done an indepth inspection on Arrow

Air, and while we found discrepancies like you find in any airline if you put them under a microscope——

Senator **Glenn**. I am thinking about some of the horror stories that we had about a pilot asking an FAA inspector to come over and look at his plane. He examined a whole bunch of things on the airplane up in Boston, and it sounded like the airplane never would have been able to taxi, let alone fly, yet the airplane was permitted to go ahead.

Mr. **Broderick**. No, sir; it wasn't. That airplane did not move from Boston for the time it took to correct all of those discrepancies. It is in fact that report which caused us to do an indepth inspection of Arrow Air.

Senator **Glenn**. But the pilot had to come over to ask an FAA inspector to do it.

Mr. **Broderick**. Then I encourage more pilots to do that. They are a very important part of the system.

Senator **Glenn**. What if the pilot doesn't do that, then the plane takes off with 200 or 300 people and it is unsafe.

Mr. **Broderick**. The point I was trying to make, sir, was that pilots are an important and integral part of this surveillance system.

Senator **Glenn**. Let me ask one other thing. This may require a change in law, I am not sure, but let me ask you some questions here on publicly owned aircraft, city-owned aircraft, in fact, federally owned aircraft, not military aircraft, but this is one that came to my attention, and I had not been aware of it.

Let's take one of your own aircraft, by law, it can take off and be completely unair worthy.

Mr. **Broderick**. That is right.

Senator **Glenn**. By law, it doesn't have to comply with FAA regulations at all. Flight regulations as far as the pilot filing a flight plan, yes, but as far as inspection of the aircraft, engine, or air worthiness, there is nothing that says that it has to comply at all.

Mr. **Broderick**. That is correct.

Senator **Glenn**. State-owned aircraft in Ohio that the Governor flies around in, and that gives State officials transportation, does not come under FAA regulations; is that correct?

Mr. **Broderick**. It need not.

Senator **Glenn**. It need not, but some of them do. They are smart if they do.

The point being that there are some 5,000 aircraft flying around this country that are not inspected on a regular basis, and there is no requirement for it. Pilots have nothing to comply with as far as that airplane goes, it is nonexistent as far as FAA goes.

Mr. **Broderick**. Yes, sir; the FAA has not legal jurisdiction over aircraft that are not civil aircraft. A public aircraft is by definition not a civil aircraft.

Senator **Glenn**. You have not put out regulations of your own to correct that situation, I gather.

Mr. **Broderick**. No, sir.

Senator **Glenn**. Why has this been permitted to go ahead thus far, because I was surprised to find this out. This gets into State rights, and all sort of stuff.

Mr. BRODERICK. I think that it is a question of a government operating a private aircraft for governmental purposes, and then deciding under what conditions they want to operate it. This goes back to at least 1938.

Senator GLENN. Those aircraft are just as likely to cause problems when they fall down and kill people as any other airplane in the sky.

Mr. BRODERICK. Yes; but it is very important to recognize that they cannot use those aircraft for compensation. There can be no fare paying passengers or freight.

Senator GLENN. These are, in fact, publicly owned aircraft.

Mr. BRODERICK. Yes, sir.

Senator GLENN. They are owned by the State.

Mr. BRODERICK. Owned by the State of Virginia, or whatever.

Senator GLENN. Would you prefer to have those come under FAA regulation?

Mr. BRODERICK. I think that it is a governmental decision. The question is——

Senator GLENN. In the interest of safety, I would want them.

Mr. BRODERICK. It certainly would standardize air safety across the country, and eliminate a state of divergence.

Senator GLENN. I think that this is an area that we will want to look into because there are some 5,000 aircraft that don't come under FAA, that are owned by the States, and even FAA's own aircraft. I am sure they inspect them, at least I hope you do.

Mr. BRODERICK. We, in fact, don't operate like that. But, yes, you are right.

Senator GLENN. They don't come under your regulations because they are Government-owned aircraft.

Mr. BRODERICK. That is right. It is only under our own internal orders that we operate under.

Chairman ROTH. Senator Gore.

Senator GORE. Thank you very much, Mr. Chairman.

Welcome, Mr. Broderick.

According to the General Accounting Office, two airlines were cited by the FAA for serious violations, and were nevertheless allowed to continue flying military charter. Why is it that you at the FAA failed to inform the Department of Defense about these violations?

[At this point, Senator Levin entered the hearing room.]

Mr. BRODERICK. The short answer is because we did not have a procedure in place at that time that required us to inform the Department of Defense about allegations of violations.

We are working right now with the Department of Defense on developing new procedures that will incorporate the kinds of things that you are talking about. Let me point out, by the way, I believe one of those was Air Resorts, that they talked about, and when we were involved in the suspension of Air Resorts, we, in fact, did immediately inform the Military Airlift Command.

I learned about these just a couple of days ago, and I have been unable to find the detailed chronology on this to submit it.

Senator GORE. You did not have procedures in place to give the information to the military about deficiencies in air charters that were carrying military personnel to their duty assignments.

Mr. **Broderick**. Not until those deficiencies involved grounding or suspension of the certificate, or something of that nature.

[At this point, Senator Cohen left the hearing room.]

Senator **Gore**. You said that you are in discussions with the Department of Defense to try to set up a system. Have you set up one yet?

Mr. **Broderick**. Right now we are working very close with the military on any unusual activity that we see with aircraft that carry military charter. In fact, my special assistant is a DOD employee.

Senator **Gore**. You mentioned Air Resorts. In fact, they were allowed to continue flying military passengers even after serious violations were found by the FAA. They were not suspended until one of their planes crashed carrying the East Tennessee State University basketball team. Is that correct?

Mr. **Broderick**. That is what I read in the papers this morning. I haven't looked back in detail at the Air Resorts case.

Senator **Gore**. We have, and if you want to supplement the record, that will be fine.

With respect to Arrow Air, there were multiple violations found by the FAA during the years 1982, 1983, and 1984. None of those violations were brought to the attention of the Military Airlift Command. Is that correct?

Mr. **Broderick**. Yes.

Senator **Gore**. You testified that you are in the process of remedying that, but it just seems incredible to me that one agency of the Government would be citing them for serious safety violations, and fail to inform the other. I won't belabor that point because you said that you were working on it.

Let me ask you, not about the lack of a method for informing the Department of Defense, but about the apparent lack of any mechanism for enforcing your own regulations. Between September and December of 1982, to take the first example, you cited Arrow Air 13 times for excessive crew scheduling, which we have heard a great deal about. But for almost 2 years, until September 1984, absolutely nothing was done about these violations. There were no sanctions, no fines, nothing. How do you explain that?

Mr. **Broderick**. The FAA needed at that time, and we are putting into place right now, an effective evaluation system. In fact, that was the single largest recommendation from one of several studies that I mentioned in my opening statement.

We did not have an effective central evaluation of the methods that our decentralized field offices were using to enforce the regulations and as a result we did not catch things like that. I can assure you that we are setting up a system right now that will be fully operational by June, and we will be looking over that kind of thing.

Senator **Gore**. When you finally got around to doing something about these violations, you let them off the hook; correct?

Mr. **Broderick**. Counsel informs me that the reason they had to do that was because of a thing called stale complaint. It had been around for a long time, and the people had never done anything about it.

Senator **Gore**. The way the record reads, in one case, the file, the enforcement file, was found to be empty, and as a result, the FAA said, "We can't do anything because the enforcement file is empty," even though the inspectors had found some violations, documented them, issued citations, sent them up the chain of command, and then the enforcement file was empty. How do you explain that?

Mr. **Broderick**. I don't. That is an unacceptable answer.

Senator **Gore**. In the other dozen cases where Arrow Air was cited for violations, they were let off the hook for yet another reason. The FAA noted, after 2 years, that Arrow had a new person who was brought in to manage, a former FAA employee—that is my interpretation, that was not noted in the FAA records but he happened to be a former FAA employee.

The FAA noted that they were making a sincere effort now, and just let them off the hook. Is that a fair summary?

Mr. **Broderick**. I wouldn't characterize it that way. I think having talked with a couple of pilots of Arrow, there was, in fact, a dramatic turnaround in that airline. Seven of the top eight people changed about the time of the indepth inspection in 1984. Their compliance was good, and remainded good.

Senator **Gore**. They had more complaints in 1984 than any other airline except one. I am familiar with the phenomenon of a crackdown producing some improvement in some cases. What I don't understand is why this many violations, despite the fact that some new management was brought in, would result in amnesty for the company. Why would that take place?

Mr. **Broderick**. There is no good explanation for that. I don't have the details on every one of them. I don't know at what time those violations were uncovered. But there is no good explanation for that, and it shouldn't happen. I can assure you that when we do our evaluations in the future, we will take strong action if our offices are acting like that.

The Administrator and the Secretary will not tolerate people waiving away the violations of the Federal Aviation regulations.

Senator **Gore**. Are you satisfied that you have made sufficient changes to remedy this?

I am hesitant. Your words sound reassuring, and you are saying what I would have you say. Yes, this was wrong. We made a mistake. We are going to change our procedures now, and it is going to be different in the future, trust us. I would like to. Give me some reassurance that is more than words.

Mr. **Broderick**. I could tell you that we have an extraordinary commitment to safety on the part of the Administrator and the Secretary and myself. We are going to change the way the FAA flight standards operation is conducted. I think that if you look at the kind of things that we are doing, as I indicated in the opening statement, the kind of resources that are being applied, even in the era of Gramm-Rudman budget reductions and very difficult budgets.

Next year, the fiscal year 1987, the President's budget has more money for FAA's aviation standards operation, and not less.

Senator **Glenn**. That is after having butchered you the previous year.

Mr. **Broderick**. No, sir.

Senator **Gore**. What is your reaction to the recommendation that I made earlier, that we have a law preventing an FAA official, or inspector, from resigning from the FAA one day, and going to work for the airline that that person was responsible for inspecting the next day. Would you support that law?

Mr. **Broderick**. I can see offhand three specific problems, very quickly. We already have two provisions of the existing Ethics in Government Act which effectively prohibit conflicts of interest. The first one is that anyone who is negotiating for employment with someone is prohibited from acting in any kind of decisionmaking capacity with that organization. That is a criminal offense.

The second is, any employee of an organization like the FAA that goes to work for an airline, or any other organization that we deal with, is prohibited from dealing back with the FAA on certain issues for prescribed lengths of time, and that, too, is a criminal offense if it is violated.

The third point I would make is, that I would have reservations about saying to pilots, you go to work for the FAA, for 3 years after you leave the FAA, for whatever reason, you can't go to work for an airline. That would give us, I think, some significant recruitment difficulties.

Senator **Gore**. I don't accept your arguments, but they can certainly be taken into account.

Two more very quick questions.

Chairman **Roth**. They will have to be.

Senator **Gore**. One more quick question.

Chairman **Roth**. There is Senator Levin.

Senator **Gore**. All right.

Chairman **Roth**. Senator Levin.

Senator **Levin**. I would be happy to yield 1 minute of my time to the Senator from Tennessee.

Senator **Gore**. I appreciate my colleague's courtesy.

I am very concerned about specific instances, in candor. As you know, these people were based at Fort Campbell, and this is a matter of great, great concern, not only in Tennessee, but around the country.

Speculation has now focused on the fact that the weight measurements used the average of 170 pounds per person, whereas when the soldiers are all loaded up with their equipment and gear, the average is probably more like 220 pounds, making the aircraft almost 12,000 pounds overweight.

This speculation has caused the National Transportation Safety Board to issue a recommendation that each airline needs to use actual weight much more often.

Does the FAA intend to implement the recommendations of the National Transportation Safety Board in this instance?

Mr. **Broderick**. Yes, sir. I believe they have already been implemented.

Senator **Gore**. Thank you.

I thank my colleague.

Senator **Levin**. Mr. Chairman, thank you.

I am very much concerned about the safety statistics. We found that 1985 was the second worst year in air safety for U.S. commercial carriers, and 526 people lost their lives last year.

Is it not true that pilot reported near collisions are dramatically on the rise? I have given you the statistics on actual losses of lives, and now I am asking you about almost lost lives, that is, near collisions reported by pilots. Can you give us those figures over the last 5 years?

Mr. BRODERICK. I can supply that for the record, sir.[1] Frankly, that is out of my area of responsibility, and I can just tell you that I know that our accounting system has been greatly improved in the last years, so that we don't have reports of near collisions lying around in drawers, and unreported in the national data base. I think that that has a lot to do with the increase that you speak of. But I will be happy to supply the details of this for the record.[1]

Senator LEVIN. You stated that in the last year, your regulations were changed?

Mr. BRODERICK. Yes, our internal accounting system was changed, and retroactively, we went back and recounted for the previous year. So we actually have 2 years of changed data now, and they show an increase from the previous years.

Senator LEVIN. Are you saying that there has, in fact, been no real increase in pilot reported near collisions?

Mr. BRODERICK. I am saying that that may in fact be the case. We have changed the ground rules under which we do the accounting and, therefore, the two data bases are not really comparable.

Senator LEVIN. Do you know whether or not there has been an increase using the same data base?

Mr. BRODERICK. Now that we have changed it, we can't go back and unchange it. I think that there has clearly been an increase in the number of reports, and there has certainly been an increase in the number of reports that we are tallying in.

Senator LEVIN. Did you read the National Journal article on this issue?

Mr. BRODERICK. No, sir.

Senator LEVIN. Please give us your figures for the record because that article says that there has been a 93-percent increase from 1981 to 1985. I think that it is very important to hear from the FAA about this figure.[2]

You have indicated that you accepted reports that you received from pilots and other airline employees on problems with airlines. Is there a hotline of some kind where phone calls can be made to you from pilots or other employees?

Mr. BRODERICK. Thank you, sir, 1-800-255-1111 is the number, and that is a hotline directly to the 10th floor of the FAA headquarters building. It is a safety hotline that is available for anonymous reports, for anybody who has safety problems to discuss in any way.

Senator LEVIN. How many times has that been used in the last 5 years?

---

[1] See responses to written questions which start on p. 219.

[2] The information referred to has been retained in the subcommittee files.

Mr. **Broderick**. It is a fairly new innovation. I believe that it is only about 1 year old, and we have had 300 events of which we had about 20 to 15 percent violations.

Senator **Levin**. You have had about 300 calls on that hotline in a year, with 15 percent causing some action on your part?

Mr. **Broderick**. They all got action on our part, about 15 percent were enforcement actions.

Senator **Levin**. One of the pilots who was here last week indicated that there is some real fear in using that number because it appears that somehow they will not be protected, that the employer will be able to ascertain, the small companies in particular, who it is that filed the complaint.

My question of you is wether you are familiar with Senator Roth's bill, which a number of us have cosponsored, which would protect the whistleblowers, if they haven't already commented on that.

Mr. **Broderick**. I have not yet—I know of it, but I haven't yet seen it. Surely, we would be happy to review it, use the departmental procedures to give our position on it. I have not yet had a chance to read it myself.

Senator **Levin**. Do you see a problem with the FAA having the dual role of promoting the civil aviation industry, and protecting the public from safety violations?

Mr. **Broderick**. No, sir, I don't. I have a very difficult time defining what we do that could be characterized as promotion. The only thing that I do that could be characterized as promotion by me is selling safety. We have an accident prevention program that we think is promotional in nature, but it is a safety program.

Senator **Levin**. Mr. Chairman, If I could, I would like to yield the balance of my time to Senator Gore.

Chairman **Roth**. Senator Gore.

Senator **Gore**. Very briefly, Mr. Broderick. We heard testimony 1 week ago about a problem with the limitations on the number of hours that a pilot can fly. To put it in a nutshell, your current limitation regulates only the number of hours that a pilot can fly with passengers in the plane. Some airlines have a practice of pushing their pilots right up to the maximum number of hours allowed with passengers, and then having them turn around and ferry an empty aircraft back to the home base, or vice versa, they might have to fly the empty aircraft first.

Obviously, that pilot is going to get just as tired flying the plane and have as much trouble staying awake whether there are passengers in the plane or not. Don't you agree that your regulations need to be amended to cover this problem?

Mr. **Broderick**. Yes, sir, I do. We are doing that this year. The International Flight and Duty Time regulations are up for review, and we will be rewriting them and make them in agreement with the National Flight and Duty Time regulations that we have just completed last year. I can assure you that this will be one of the things that we will address in the public rulemaking process.

Senator **Gore**. Thank you, Senator Levin, and thank you, Mr. Chairman.

Chairman **Roth**. Senator Glenn.

Senator **Glenn**. Thank you, Mr. Chairman.

If I can call that hotline 255-1111, and ask you to keep the size of the air traffic to the inspection and the oversight capability of FAA, FAA will give a response?

Mr. BRODERICK. We will certainly address your question, Senator.

Senator GLENN. I think I will call this afternoon.

I am going to get at this in a little different way. I want to run through the NTSB set up, how they get their data, the actual accident investigation, and how they make their recommendations to FAA. Then what you do with them, and how you are organized to go through those things, and go down through the organization because that is what this committee is basically charged with, the oversight of government organization.

I would request your advice, please, on what we can do to help you in this area, if you need a different organizational setup. You need to split the advocacy function from the safety function, as Senator Levin mentioned a moment ago. I don't know, I don't really have a feel for that.

I am very, very concerned that we get into this sometime, and it will have to be either in further hearings, or private conversations, or whatever, to know whether we will make recommendations on helping you organize to do a better job.

You have commented on the administration supporting increased numbers of personnel, yet you had 2,014 inspectors at one time, and the administration butchered them down to 1,400. This is not a very good record, and now we are in trouble because of that.

I commend the administration, and I commend everybody involved in the budget process for putting more back in. That is a little bit like basic research, they say, they are adding back in, but that is after a 29-percent cut in the first year of the administration, and we are not quite back up to where we were in the beginning. I think that FAA is the same way.

Until we get back up there, I pledge to you my support for whatever you think is required to do this job. What we have to do is to make certain that we tailor the size of what is permitted to fly in this country to what you are able to oversee and inspect, to make sure that it is as safe as it possibly can be.

That is really what we are trying to do. We are not trying to crucify anybody, or send anybody to jail. We are trying to increase safety, and that is your job. If we can help you to do it, with more people, more personnel, more support, or whatever, please let us know. I am going to call your hotline this afternoon, and it won't be anonymous, I will tell you who called.

Chairman ROTH. Let me ask you two very quick questions.

There is all this testimony that there is no limitations on the time served by airline flight attendants. Is this something to be concerned over?

Mr. BRODERICK. That will be addressed this year, along with the International Flight and Duty Time.

Chairman ROTH. My second question is, are there any special procedures with respect to airlines that are in financial difficulty?

I think that one of the concerns expressed here has been, when they begin cutting corners because of financial problems, this can create a real safety hazard. How do you handle that now?

Mr. **Broderick**. Any time we find an airline, through whatever source of information, formal or informal, is in financial difficulty, we institute special surveillance and oversight of that airline to make sure that they don't cut corners that could result in safety problems. It is a part of out "Standard Handbook Operative Practice."

Chairman **Roth**. We have to empty the chamber, but I am going to, if there is no objection, provide that additional documents be incorporated, subject to the approval of the ranking member and myself.

Senator **Glenn**. I would ask one other thing, if any of us have additional questions of the witnesses this morning, including Mr. Broderick, that we need to put in the record, we would ask for an early response to those.

Chairman **Roth**. The record will remain open for 10 days. The subcommittee staff will contact you for the material that we requested. The record will remain open for 10 days for the receipt of written statements for the record, and will remain open for questions to be propounded in writing.

Thank you very much.

[Whereupon, the subcommittee adjourned to reconvene at the call of the Chair.]

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

Received by
Subcommittee on Investigations

JUL 03 1986

U.S. Department
of Transportation
**Federal Aviation
Administration**

800 Independence Ave., S.W.
Washington, D.C. 20591

JUN 30 1986

The Honorable William V. Roth
Chairman, Permanent Subcommittee on
Investigations
Committee on Governmental Affairs
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

I am pleased to enclose the Federal Aviation Administration's response to 24 questions you asked in your letter of April 18. Individuals in the following organizations participated in preparing the responses to that letter: Office of the Chief Counsel, Office of the Associate Administrator for Aviation Standards, Office of the Associate Administrator for Air Traffic, Office of the Associate Administrator for Development and Logistics, Office of Aviation Safety, the Acquisition and Materiel Service, the Western-Pacific Region, and the New England Region.

I am also enclosing with this response the materials you requested in your April 18 letter.

Sincerely,

Don Engen

Donald D. Engen
Administrator

Enclosures

50 Years of Air Traffic Control Excellence
— A Standard for the World —

1. We understand that the FAA recently issued Program Guidelines (Order 1800.56) governing the development and execution of annual work programs.

   a. What is the purpose of the Program Guidelines?

   b. How were the Program Guidelines devised?

   c. How can the FAA justify minimum work activity levels and frequencies that are the same for industry giants, small non-scheduled carriers, new entrants, and carriers experiencing financial difficulties?

   d. We have heard criticism that the minimum work activity levels and frequencies are too low for adequate surveillance. What is the FAA's response to this criticism?

   e. How will the Program Guidelines impact certification activities, which have consumed a large percentage of the FAA's inspector workforce's time in recent years?

   f. To date, what observations has the FAA made concerning the effectiveness of the Program Guidelines?

   g. Does the FAA plan to revise the Program Guidelines, and if so, when and how?

Answer: The basic purpose of the annual work program is to specify, for the first time, the minimum numbers of inspections (by type of inspection) to be conducted by FAA personnel of various segments of the aviation industry. It will assure that all aspects of the aviation industry receive FAA surveillance, and it will provide meaningful information to the agency in terms of targeting additional surveillance efforts. These guidelines were developed based on information developed from such efforts as the National Air Transportation Inspection, Job Tasks Analysis Groups, Management Systems Staffing Standards efforts, and preliminary data from the General Aviation Safety Audit. These programs do not prescribe the same work activity levels for "industry giants" and smaller carriers. The size and scope of a carrier's operations determine its inspection program. The program guidelines do not address the issue of inspections of financially distressed carriers since this is covered by other agency orders which call for increased surveillance by FAA inspectors whenever financial problems are being experienced by a carrier. In that regard, it is important to recognize that the program guidelines are not the sole agency program concerning surveillance. The program guidelines specify a minimum surveillance program, which is supplemented both by the agency's national inspection program as well as regional special emphasis surveillance activities in a way that yields a comprehensive picture of the aviation industry. In terms of certification activities, the program guidelines downgrade the priority of certification below surveillance activities and accident investigations which must be given top priority. It is too early to outline our views on the effectiveness of the new work program, although we will be examining it carefully and intend to renew the order at least on an annual basis.

2. Other than those activities described by Mr. Broderick in his testimony before the Subcommittee, what is the FAA doing to achieve greater standardization among regions? When will all ongoing and anticipated standardization projects be completed?

Answer: There are a variety of activities underway within the agency to improve standardization. Significantly, these efforts are not just in the Aviation Standards area, which Mr. Broderick oversees and which was the topic of the Subcommittee's hearing. For example, in the air traffic area, we have attained far greater standardization through moving away from decentralized control over ATC operations to a direct headquarters' control over ATC operational issues. Operational decisions concerning standards, procedures, and requirements are now under the authority of headquarters' air traffic personnel rather than the FAA's regional directors which was the past practice.

Throughout FAA's functional areas, we have increased the headquarters presence. Furthermore, we have promoted better coordination and understanding which lead to standardization through increased communications as well as meetings on important subjects. One example of such a meeting in the Aviation Standards area was a four day seminar we conducted, involving both agency field personnel and nearly one hundred air carrier personnel, on the topic of maintenance.

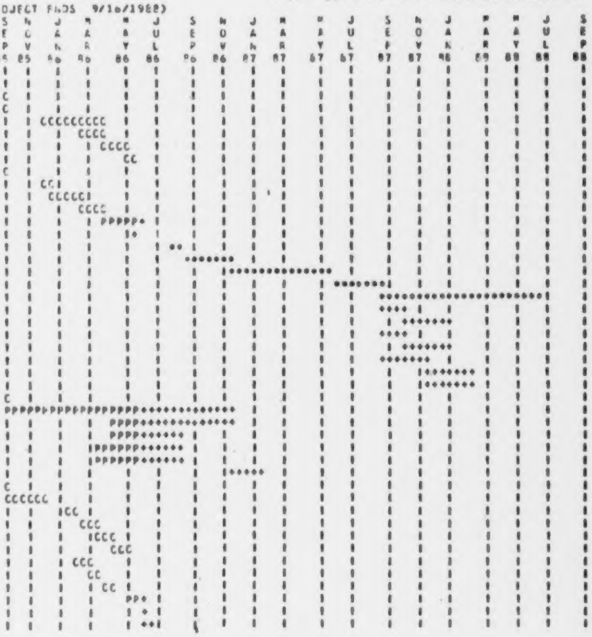
The enclosed list of projects being conducted under the SAFE Program within the agency's flight standards discipline reflects the variety of programs we have underway in such areas as position management, inspector selection, staffing requirements, training, manuals and guidance materials, human relations, testing programs, and the like that will enhance standardization. Projected completion dates for all facets of the SAFE Program are shown on the list.

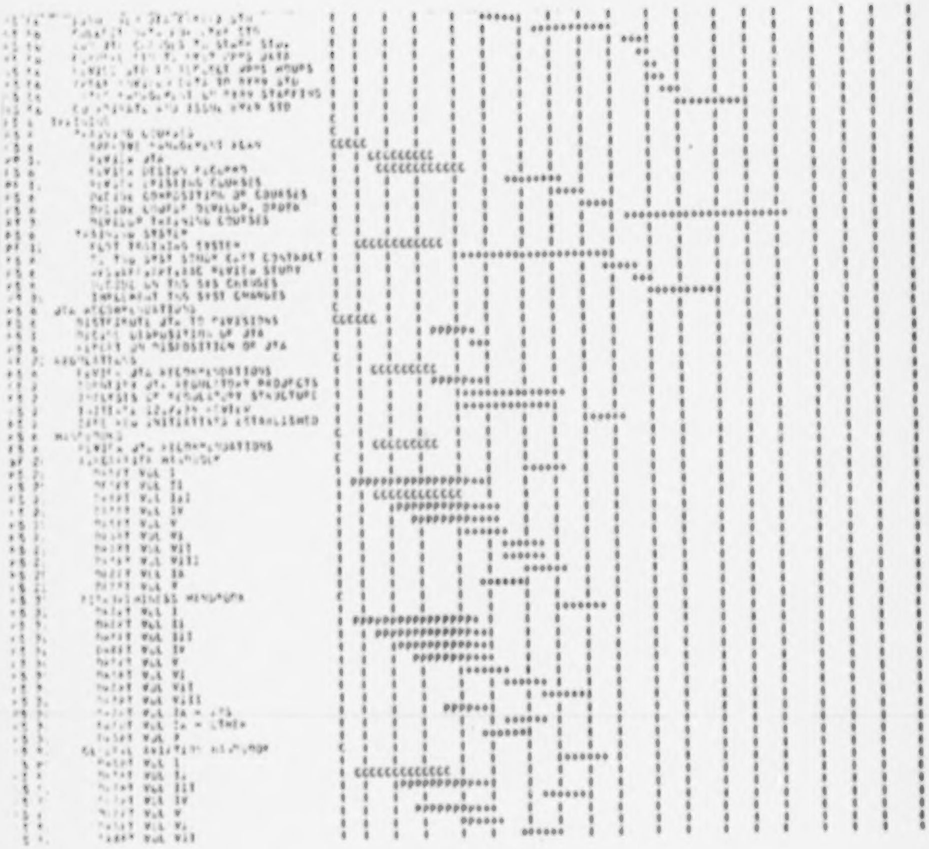
PROJECT SAFE

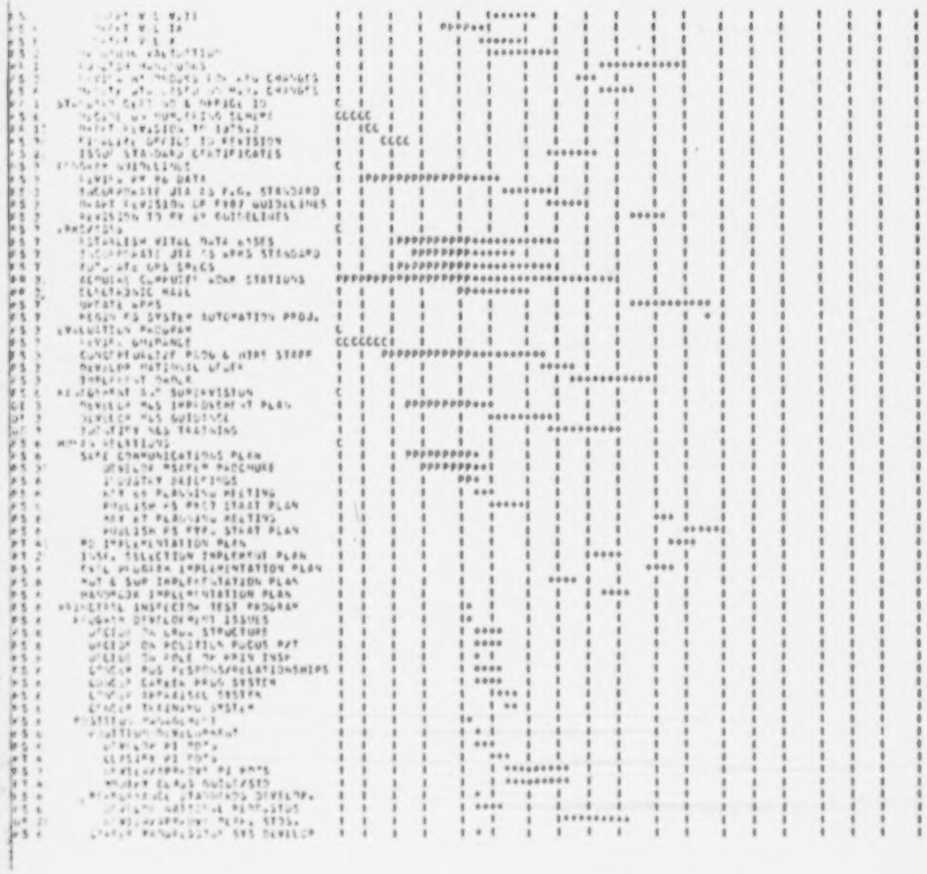
Project SAFE is an all encompassing program to identify and correct findings associated with the Flight Standards Inspection Program. Rather than focusing on a specific finding as a singular issue, SAFE considers each finding as part of a need to update the entire Flight Standards System. Findings and conclusions from the GAO, the Secretary's Safety Task Force, the National Air Transportation Inspection, etc., are being addressed as part of the update of the Flight Standards System under Project SAFE. Project SAFE is currently programmed into a program management and project planning system which is being used to track all project activities associated with SAFE. In summary, 14 project teams have been established to deal with particular aspects of the Flight Standards System. The teams will consider all recommendations received by the agency in their area of concern as they complete their part of the project. For example, all recommendations concerning standardized, timely guidance to field inspectors will be part of the handbook teams' project to rewrite FAA inspector handbooks. A fifteenth team has been established to accelerate the principal inspector program through the "SAFE" process. This will yield short term results in a critical inspection position and will validate the Project SAFE methodology.

The attached BAR CHART shows each of the project teams, the activities of these teams, and the status of each activity. The "number" indicates the team and activity number; the "code" designates the office of primary responsibility to complete the given activity; "C" indicates a completed activity; "P" indicates an activity in process; "+" indicates a scheduled activity; and "*" indicates an activity on the critical path to complete the project. This bar graph is routinely updated and distributed throughout the Flight Standards organization to reflect current decisions as the plan progresses, to coordinate team activities, and to inform field management.

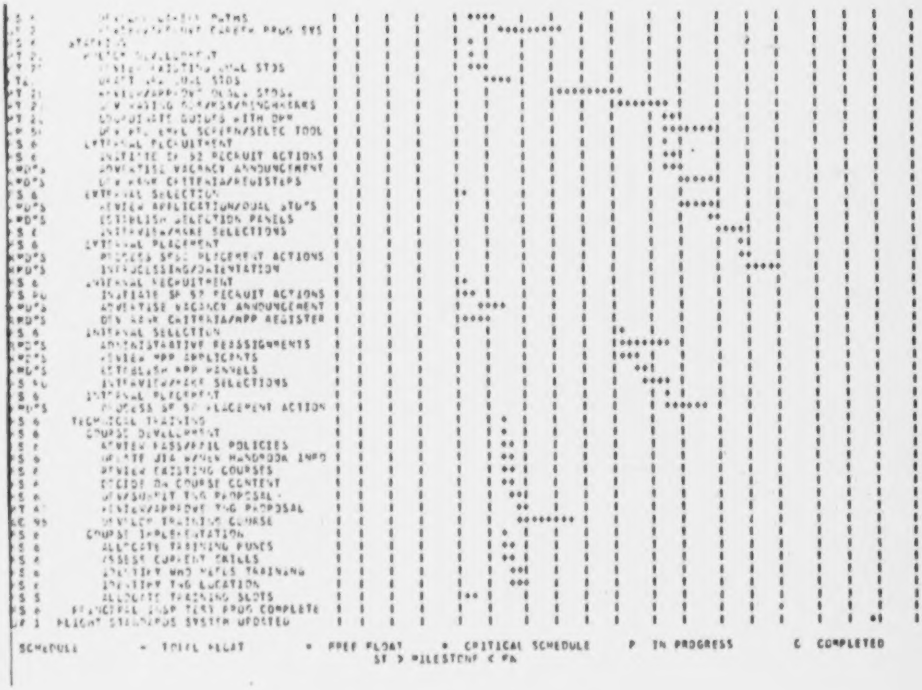
```
                                        RUN DATE      5/21/1986       2:19 PM
                                        ****************** MAPPS ******************
                                        * MANAGEMENT AND PROJECT PLANNING SYSTEM *
FILE  [illegible]                       *    FEDERAL AVIATION ADMINISTRATION      *        STATUS        PROCESSED
                                        *                                         *
DATE  5/21/1986                         *            ** BAR CHART **              *        PROJ. STARTS  9/20/1985
                                        *          P R O J E C T   S A F E        *
                                        *    A BLUEPRINT FOR FLIGHT STANDARDS     *        LAST ACCESS   5/21/1986
                                        *       MMSI - REPORT SERIES 1723         *
                                        *******************************************                     PAGE  1

[illegible]
  ACTIVITY NUMBER
                                                            ** DYNAMIC PLAN!  HAVE THE LAST UPDATE? **
# FROM PROJECT DAY  -2 EARLY SCHEDULE  (PROJECT ENDS  9/16/1988)

CODE   ACTIVITY DESCRIPTION

JA 1   PROJECT SAFE APPROVED
FS A   ANALYSIS OF FUNCTION
PF 3      REVIEW SYSTEM
FF 3      DEVELOP OPTIONS
FS F      REVIEW OPTIONS
FP 3      PRESENT RECOMMENDATIONS TO AFS
FS F   POSITION MANAGEMENT
PF 1      LETTER ASKING FOR PD'S
PF 1      CONSOLIDATE PD'S
FS A      MATCH JTA TO PDS
FS A      COORDINATE WITH PD'S & COMPLETE
FS A      INITIATE PRINC. INSP. TEST PROG.
FS 1      DECIDE ON FUTURE POSITIONS
PP 1      DEVELOP STD PD'S AND JTA TASKS
PT 4      REVIEW PD FOR CLASSIFICATION
PT 4      REVIEW / REVISE CLASS GUIDE
PT 4         COMPLETE CLASS.GUIDE AMMEND
PP 1      REVIEW CLASSIFICATION STANDARD
PT 4         COMPLETE CLASS STD AMMEND
PP 1      REVIEW QUALIFICATION STANDARD
PT 2         COMPLETE QUAL STD AMMEND
PP 1      REVIEW PERFORMANCE STANDARDS
UE 2         COMPLETE PERFORM STDS
MP 1      DRAFT HUMAN RESOURCE MGT MANUAL
AM 5   INSPECTOR SELECTION PROCESS
AM 6      REVIEW EXISTING SYSTEM
AM 6      DEVELOP REVISED ANNOUNCEMENT
AM 6      DRAFT STRUCTURED INTERVIEW GUIDE
AM 6      DEVELOP PLACEMENT TESTS
AM 6      DEVELOP APTITUDE TESTS
AM 6      DRAFT SELECTION PROCESS GUIDANCE
MS 56  STAFFING STANDARDS
MS 56     PROJECT PLAN
MS 56     COMPARE STAFF STD TO APMS
MS 56     REVIEW JTA & STAFFING STANDARDS
MS 56     DETERMINE DATA REQUIREMENTS
MS 56     SOLICIT REVIEW DATA FROM HQ.
MS 56     [illegible] BY USING APMS DATA
MS 56     COMPARE APMS DATA TO STANDARD
MS 56     REVIEW STAFF STD, JTA & PROG GUIDE
MS 56     REVISE STAFFING STD SOFTWARE
MS 56     ENTER DATA TO STAFFING STD.
MS 56     [illegible] MANAGEMENT
```




REVIEW JTA
REVIEW EXISTING COURSES
DEFINE COMPOSITION OF COURSES
DEVELOP TRAINING COURSES
TRAINING SYSTEM
IMPLEMENT THE SYST CHANGES
DISTRIBUTE JTA TO DIVISIONS
REPORT ON DISPOSITION OF JTA
REGULATIONS
REVIEW JTA RECOMMENDATIONS
ANALYSIS OF REGULATORY STRUCTURE
REVIEW JTA RECOMMENDATIONS
REPORT VOL I
REPORT VOL II
REPORT VOL III
REPORT VOL IV
REPORT VOL V
REPORT VOL VI
REPORT VOL VII
REPORT VOL VIII
REPORT VOL IX
REPORT VOL X



```
     [illegible] V I V.II
     [illegible] V.I IX
     [illegible] V I X
   [illegible] EVALUATION
   [illegible] HANDBOOKS
   REVISE [illegible] PROCEDURES FOR [illegible] CHANGES
   [illegible] CHANGES
STANDARD CERT. NO & MERGE ID
   DESIGN [illegible] NUMBERING SCHEME
   DRAFT REVISION TO 1275.2
   [illegible] OFFICE TO REVISION
   ISSUE STANDARD CERTIFICATES
PROGRAM GUIDELINES
   REVIEW BY PG DATA
   INCORPORATE JIA AS P.G. STANDARD
   DRAFT REVISION OF PROF GUIDELINES
   REVISION TO PP & P GUIDELINES
[illegible]
   ESTABLISH VITAL DATA BASES
   INCORPORATE JIA TO APPS STANDARD
   [illegible] UPS SPECS
   ACQUIRE COMPUTER WORK STATIONS
   ELECTRONIC MAIL
   UPDATE APPS
   BEGIN PS SYSTEM AUTOMATION PROJ.
EVALUATION PROGRAM
   REVIEW GUIDANCE
   CONCEPTUALIZE PLAN & HIRE STAFF
   DEVELOP NATIONAL [illegible]
   IMPLEMENT [illegible]
REINFORCE [illegible] SUPERVISION
   DEVELOP MAS IMPLEMENT PLAN
   DEVELOP MAS GUIDANCE
   INITIATE MAS TRAINING
[illegible] RELATIONS
   SAFE COMMUNICATIONS PLAN
      DEVELOP MASTER BROCHURE
      INDUSTRY BRIEFINGS
      ATT AS PLANNING MEETING
      PUBLISH AS PRCT START PLAN
      [illegible] AT PLANNING MEETING
      PUBLISH PS PRPL START PLAN
   PD IMPLEMENTATION PLAN
   INSP. SELECTION IMPLEMENT PLAN
   [illegible] PROGRAM IMPLEMENTATION PLAN
   MGT & SUP IMPLEMENTATION PLAN
   HANDBOOK IMPLEMENTATION PLAN
[illegible] INSPECTION TEST PROGRAM
  PROGRAM DEVELOPMENT ISSUES
    DECIDE ON LOCAL STRUCTURE
    DECIDE ON POLITICAL FOCUS P/T
    DECIDE ON ROLE OF PRIN INSP
    DEVELOP MAS RESPONS/RELATIONSHIPS
    DEVELOP CAREER PROG SYSTEM
    DEVELOP APPRAISAL SYSTEM
    DEVELOP TRAINING SYSTEM
  POSITION MANAGEMENT
    POSITION DEVELOPMENT
      DEVELOP PI PD'S
      CLASSIFY PI PD'S
      [illegible] PI PD'S
      [illegible] CLASS GUIDE/STD
    PERFORMANCE STANDARDS DEVELOP.
      DEVELOP NATIONAL PERF. STDS
      [illegible] PERF. STDS.
    DEVELOP [illegible] SYS DEVELOP
```



```
        DEVELOP CAREER PATHS
        INTEGRATE/REFINE CAREER PROG SYS
   STAFFING
     POLICY DEVELOPMENT
        REVIEW EXISTING QUAL STDS
        DRAFT NEW QUAL STDS
        REVIEW/APPROVE QUAL. STDS.
        DEV RATING GUIDES/BENCHMARKS
        COORDINATE GUIDES WITH OPM
        DEV RTG EVAL SCREEN/SELEC TOOL
     EXTERNAL RECRUITMENT
        INITIATE SF 52 RECRUIT ACTIONS
        ADVERTISE VACANCY ANNOUNCEMENT
        DEV RANK CRITERIA/REGISTERS
     EXTERNAL SELECTION
        REVIEW APPLICATION/QUAL STDS
        ESTABLISH SELECTION PANELS
        INTERVIEW/MAKE SELECTIONS
     EXTERNAL PLACEMENT
        PROCESS SF52 PLACEMENT ACTIONS
        INPROCESSING/ORIENTATION
     INTERNAL RECRUITMENT
        INITIATE SF 52 RECRUIT ACTIONS
        ADVERTISE VACANCY ANNOUNCEMENT
        DEV RANK CRITERIA/MPP REGISTER
     INTERNAL SELECTION
        ADMINISTRATIVE REASSIGNMENTS
        REVIEW MPP APPLICANTS
        ESTABLISH MPP PANNELS
        INTERVIEW/MAKE SELECTIONS
     INTERNAL PLACEMENT
        PROCESS SF 52 PLACEMENT ACTION
   TECHNICAL TRAINING
     COURSE DEVELOPMENT
        REVIEW PASS/FAIL POLICIES
        UPDATE JTA W/NEW HANDBOOK INFO
        REVIEW EXISTING COURSES
        DECIDE ON COURSE CONTENT
        DEV/SUBMIT TNG PROPOSAL
        REVIEW/APPROVE TNG PROPOSAL
        DEVELOP TRAINING COURSE
     COURSE IMPLEMENTATION
        ALLOCATE TRAINING FUNDS
        ASSESS CURRENT SKILLS
        IDENTIFY WHO NEEDS TRAINING
        IDENTIFY TNG LOCATION
        ALLOCATE TRAINING SLOTS
   PRINCIPAL INSP TEST PROG COMPLETE
 FLIGHT STANDARDS SYSTEM UPDATED

SCHEDULE        - TOTAL FLOAT        * FREE FLOAT    * CRITICAL SCHEDULE    P IN PROGRESS      C COMPLETED
                                      ST > MILESTONE < FN
```

3. The FAA has hired additional inspectors and is in the process of hiring more.

a. How does the FAA determine how many inspectors it needs?

b. How many inspectors does the FAA currently employ? How does this compare with the number required to meet its workload?

c. What steps is the FAA taking to ensure that inspectors are appropriately allocated to its regions and district offices?

d. What steps is the FAA taking to ensure adequate inspection coverage of air carriers until there is an adequate number of inspectors?

e. What steps is the FAA taking to improve its inspector hiring and training practices?

f. Testimony before the Subcommittee has been critical of the geographic area concept. Is the FAA planning to revise this operating concept, and if so, how will the proposed revisions affect the FAA's inspector staffing needs?

Answer: To determine how many inspectors we needed, we developed an interim staffing standard, which has recently been revised, that seeks to match people to workload. As of May 1, for field offices, we had 1,521 inspectors and 305 support staff employed. Our authorized staffing for this fiscal year is 1,810 and 344 respectively. For FY 1987, we have requested an additional 138 positions. We are continuing to refine our staffing standards to better define the specific numbers of inspectors we will need in the future. In terms of allocating inspectors to regions, that is done through the application of our staffing standards, taking into account pertinent environmental factors which may exist within a given geographical area. To assure adequate inspection coverage of air carriers during the period we are working toward full staffing levels, we have, as earlier noted, redirected our priorities to recognize the importance of our surveillance functions, we have prescribed the program guidelines, and we have established a national inspection program of cyclical, in-depth inspections of all facets of the aviation industry. We have a variety of efforts underway to improve our inspector hiring and training practices. Mr. Broderick noted a number of those activities in his prepared statement before the Subcommittee. Additional efforts are reflected on the SAFE Program enclosure. With respect to the geographical area concept, we are looking at ways of strengthening and improving it. Staffing needs will be factored into this effort.

4. We have received testimony that states that since deregulation, FAA inspectors are assigned to certificate a multitude of new air carriers. Certification requires extensive personnel and time. However, we have also learned that many new air carriers go out of business within weeks or months. It seems to be an inefficient allocation and devotion of resources to certificate air carriers that have little chance of succeeding. Do we need a better screening process to determine the financial stability and managerial capability of new air carrier entrants?

Answer: This issue is essentially within the purview of the Office of the Secretary of Transportation which assumed the economic regulatory functions that remained after the sunsetting of the Civil Aeronautics Board. The FAA has expressed its views to OST concerning this screening process and OST is currently working to refine this process.

5. It is our understanding that the FAA does not have a program for rotating inspectors among air carriers. Therefore, an inspector can stay with one carrier for a number of years. For a number of very good reasons inspection and auditing programs of other Federal agencies require a rotation program.

a. Why doesn't the FAA have a rotation program for air carrier inspectors?

b. Are principal inspectors responsible for making violation recommendations for air carriers? If so, does this create a risk that principal inspectors will favor carriers for which they are responsible?

c. Does the FAA train inspectors to recognize and avoid situations where the carrier's management personnel exert pressure to obtain favored treatment?

Answer: The Associate Administrator for Aviation Standards is currently looking at the issue of a rotation program for air carrier inspectors. This, of course, can be a very costly action to take not only for the agency but the employee as well. Further, under the geographical area concept of enforcement, there are a number of individuals other than the Principal Operations or Maintenance Inspector for an airline who are involved in the enforcement program. Typically, it is the inspector within a Flight Standards District Office who has inspected a given air carrier flight or activity who is responsible for putting the enforcement package together. A copy of the report goes not only to the POI or PMI but to the regional office which is actually responsible for taking the appropriate enforcement action. Therefore, the FAA's system is not a "closed" system involving only the POI or PMI, but one in which a number of individuals participate, thereby reducing the likelihood of collusive activity. This does not mean, however, that we should not be attentive to the possibility of an inspector favoring a given carrier. While we have no formal training covering this issue at the present time, it is a valid topic which warrants inclusion in our inspector training program, and we intend to include this subject in our revised training program.

It is also worth noting that the agency's National Inspection Program is, in a sense, a rotational program since inspector teams are formed of inspectors from throughout the country to perform the required in-depth inspections. This means that a broad-based assessment can be made not only of a given carrier's compliance with regulatory requirements by inspectors who are not generally responsible for that carrier but of the principal inspectors' oversight of that carrier as well.

6. We understand that the number of enforcement actions taken against airlines has decreased continually since 1980, yet there are more airlines than ever operating. How does the FAA explain this trend?

Answer: We are not sure of the basis of the Subcommittee's information. Although our historical enforcement data is not broken down by air carrier or general aviation designations, the figures reflect that total enforcement cases for the years 1980 through 1985 were 13,568, 13,810, 11,244, 11,130, 11,514, and 11,361 respectively. Thus, after an unprecedented number of cases in 1980 and 1981, there was little difference in total enforcement cases for the years 1982 through 1984. It should also be noted that the basic numbers of cases do not necessarily reflect the numbers of violations for which a carrier or general aviation operator has been cited. One case may involve numerous violations. We do have statistics for 1984 and 1985 for civil penalty actions initiated against air carriers. In 1984, FAA initiated 158 civil penalty actions against air carriers, seeking $778,150 in civil penalties; in 1985, FAA initiated 220 civil penalty actions against air carriers seeking $3,893,895. We believe that agency actions should leave no question in the aviation community concerning the FAA's intent to strictly enforce its safety regulations.

7. The Subcommittee has heard testimony that many air carriers are deferring maintenance on aircraft items for long periods of time.

a. Does the FAA believe that some air carriers are abusing the intent of the minimum equipment list, and if so, how?

b. Is the FAA planning to revise the minimum equipment list, and if so, when and how?

Answer: We have found during our special inspections that there have been cases where carriers have not followed the intent of the minimum equipment list by unduly deferring maintenance. We are currently looking at the agency's administration of the MEL with a view towards making changes as may be needed to increase standardization, but it is too early to say what changes, if any, may be made or when.

8. We understand that many airline pilots are retiring and fewer pilots trained by the military are available at a time when airlines are rapidly expanding and hiring more pilots. Concerns have been raised that there will not be enough experienced pilots to meet the demand, and that air carriers are lowering their hiring standards in the areas of education, experience, age and health. What is the FAA doing in response to this situation in order to ensure that air safety is not compromised?

Answer: It is important to note that all air carriers must meet the FAA's prescribed pilot requirements for all pilots which they use. These qualification requirements are set at a level which should ensure that an individual is sufficiently knowledgeable and experienced to safely pilot an air carrier aircraft. We share the Subcommittee's interest, however, in the prospect of a pilot population which is declining in overall experience. We hope that our efforts and industry's concerning the use of training devices and simulators for pilot training will help balance reduced experience levels by providing enhanced training.

9. Testimony before the Subcommittee enforced the System Worthiness Analysis Program (SWAP) concept. Recently, the FAA has been using special inspection teams to review operations of certain carriers, and we understand that such teams have detected safety hazards and regulatory violations not uncovered during the normal inspection process.

a. What has the FAA learned from the special inspections it has undertaken since 1984?

b. Does the FAA plan to institutionalize the special inspection team concept, and if so, what is proposed?

Answer: Overall, we have confirmed that the air transportation system continues to provide a high level of safety to the traveling public. At the same time, though, because of the in-depth nature of our inspections we have found a variety of discrepancies covering a range of maintenance and operations practices as well as our own practices and capabilities. The SAFE Program is intended to address the kinds of problems we have found, and a review of its provisions highlights the general nature of our response to those findings. In terms of institutionalizing the special inspection team concept, we have already done so through the implementation of our National Inspection Program that calls for in-depth, cyclical inspections of all facets of the aviation industry by teams of FAA inspection personnel.

10. The FAA has a dual mission: to promote the development, as well as to regulate the safety of, the civil aviation industry. The Subcommittee heard testimony charging that these two goals are in conflict. What activities does the FAA perform to enhance the health and growth of the industry, and what is the FAA's response to the contention that safety may suffer as a result of the agency's dual mission?

Answer: At the outset, it should be made clear that there are no functions which the FAA performs that conflict with or in any way take precedence over the FAA's safety mission. The fulfillment of the agency's safety mandate is the FAA's highest priority, and comes before any other agency activity. In fact, the allegation that safety may suffer as a result of a "dual" mission within the FAA is simply wrong. There is very little activity, if any, within the FAA which could be labeled as "promotional" rather than "safety" in nature. Perhaps the agency's aviation education program could be considered promotional, although helping to assure well trained personnel are available to meet the future needs of both industry and the FAA certainly can have an ultimate safety payoff. It has long been the FAA's view that the best means of promoting aviation is to assure that the air transportation system operates with the highest levels of safety. Therefore, there is no conflict in the agency's charter, since safety is and shall remain foremost in the conduct of our functions.

11. How does the FAA view the respective roles of the FAA and the industry in sponsoring new technologies that may enhance aviation safety?

a. We have been told that the FAA lacks adequate inspector manpower. Could the system proposed by Universal Flight Systems, in effect, act as an inspector on every airplane in the U.S. fleet?

b. Does the FAA intend further review of the proposal submitted by Universal Flight Systems? If not, why not?

ANSWER:

The FAA is taking steps, as noted during the Subcommittee's hearing, to increase its inspector workforce. We do not believe that there is a substitute for having agency personnel actually inspect air carrier operations and review air carrier records to assure compliance with the agency's regulations. In terms of the FAA's review of the Universal Flight Systems Corporation's unsolicited proposal, FAA has completed a second evaluation. In a meeting on April 25, 1986, the company was advised that the formal answer would be forthcoming that its proposal remained unacceptable.

12. According to the FAA, how many pilot-reported near-misses of aircraft were there in 1981, 1982, 1983, 1984, 1985, and in 1986 to date?

ANSWER: The number of pilot reported near midair collision incidents per calendar years 1981, 1982, 1983, 1984, 1985, and 1986 to date are shown below:

YEAR	Number of Incidents
1981	395
1982	311
1983	475
1984	589
1985	758
1986 (as of June 16)	336*

In 1985, a new monitoring system was implemented which enhanced the reliability of the NMAC pilot reporting process. This enhancement has contributed to a rise in the number of 1985 NMAC reports.

*1986 figures are preliminary and subject to change.

13. In his testimony before the Subcommittee, Mr. Broderick stated that the FAA will be addressing, in connection with its review of the International Flight and Duty Time Limitations, the lack of regulation of flight attendant flight and duty time and pilot flight and duty time with respect to non-revenue flights.. What are the FAA's views on these issues and what specifically is it planning to do?

Answer: Since the topics discussed in the question will be the subject of rulemaking activity by the FAA, we are not in a position to describe in any detail what our plans are other than to note that we do intend to schedule a project this year which will propose for public comment the possible establishment of flight and duty times for flight attendants and the possible inclusion of non-revenue flights by air carrier pilots as covered duty time.

14. The General Accounting Office recently drafted a report asserting that two charter airlines, South Pacific Island Airways and Air Resorts, flew military flights during periods when the FAA knew or should have known about significant safety problems with these carriers' operations. The report raises serious questions about the FAA's ability to detect and remedy airlines' safety violations, and indicates that military personnel may have been exposed to unnecessary risks. Discuss the FAA's response to the GAO's report, including answers to the following:

a. Why didn't the FAA alert the military to potential problems with these carriers' operations, and what steps has the FAA taken to ensure that the military now receives this type of information?

b. Why did the FAA permit Air Resorts to continue to fly military charter flights at a time when the remainder of that carrier's fleet was grounded?

c. Why did it take the FAA months to ground these carriers after it had received recommendations that immediate suspension of their operations was warranted?

Answer: Major changes to the procedures involving the exchange of safety information between FAA and DOD have been implemented since the Arrow accident. During the time-frame referenced in the GAO report, FAA reporting to the military was based on an obscure 1976 agency order that was not readily available to all inspectors and, as a consequence, some mistakes were made. Generally speaking, the military was not advised of inspections involving military carriers unless certificate suspension or revocation action was involved. In the cases of Air Resorts and South Pacific Island Airways, however, we believe that these situations were verbally discussed with Military Airlift Command (MAC) personnel, although no records of this coordination activity can be found.

The following specific actions have been taken since the Arrow crash to upgrade the FAA/DOD relationship on safety matters:

1) A high level "Executive Review Group" consisting of DOD, DOT, and FAA representatives has completed a review of all policies and procedures related to military use of air carriers.

2) MAC pilot observers are now allowed in air carrier cockpits.

3) A special inspection program for military charter operations has been initiated. Several indepth inspections have been completed.

4) The military has been invited to accompany FAA during special inspections and to attend both in- and out-briefings of the carriers involved. The inspection reports are provided to MAC as soon as they are in final form.

5) Safety information is exchanged on a daily basis between the FAA and the military.

6) A MAC liaison officer will be assigned to FAA headquarters in the near future. He will have access to automated data, enforcement information, inspection schedules, as well as provide input on military needs or priorities.

At the time that Air Resorts was permitted to fly four aircraft in military charter flights, both the FAA and the military agreed that these operations could be conducted safely. In any situation involving possible suspension of an air carrier's authority, there is a legal process that can result in delays before an actual suspension is imposed. In terms of the Air Resorts and SPIA situations, it is accurate to say that, given the level of attention and cooperation between the FAA and DOD that now exists, more detailed analysis would be accomplished today in both cases prior to authorizing such flights.

15. In August 1985, the FAA closed the Wilmington Flight Standards Field Unit and consolidated it into the Philadelphia office. Now the FAA is closing the Flight Service Station in Salisbury, Maryland which will be consolidated into the Washington Automated Flight Service Station in Leesburg, Virginia. This leaves the heavily congested Delmarva Peninsula area with no local FAA facility. The Associate Administrator for Air Traffic has made a commitment that service to area pilots will be at least equal to service prior to consolidation.

a. What has the FAA done to ensure it will be able to fulfill the Associate Administrator's commitment?

b. Currently, some of the smaller Flight Service Stations have an airport advisory service which enables pilots to call in when they are within 8-10 miles of the air traffic pattern. Will the Leesburg facility offer this service, and if not, isn't the FAA failing its commitment to equal or better service?

ANSWER: The Salisbury Flight Service Station (FSS) is scheduled for consolidation into Leesburg in FY 1986. However, due to the current budgetary limitations, we are reviewing our FSS Implementation Plan which may affect this date.

We commissioned the Model I Flight Service Automation System at Leesburg on April 20. Consolidation of Salisbury into Leesburg would extend this capability to pilots on the Eastern Shore. The essential radio and telephone communications circuits serving Salisbury would be remoted into Leesburg. In addition, the reassignment of specialists from Salisbury to Leesburg would enable them to increase their productivity and expand their ability to provide other services not available at Salisbury.

Airport Advisory Service (AAS), as provided at Salisbury, is a means to exchange airport, weather, and known traffic information between the FSS specialist and pilots operating within about 10 miles of the airport. The data provided by the specialist includes wind direction and velocity, favored or designated runway, altimeter setting, and factual information on known traffic.

AAS can only be provided by the FSS that is located on the airport in question. The specialist does not provide any control function, and participation by the pilot is on a voluntary basis.

Leesburg will not provide "AAS" for the Salisbury Airport; however, similar information will be made available to pilots in the Salisbury area via air-ground frequency controlled by Leesburg.

16. Former FAA inspectors who participated in a 1984 special inspection of Continental Airlines testified before the Subcommittee that the team's original report was significantly altered. Describe in detail the process by which the original report was rewritten, including the names and titles of all FAA employees who participated in the rewriting, editing, and review of the report, what portions of the report each employee rewrote, edited or reviewed, and the dates of all such activities. In addition, with respect to Check Airman Finding #7, explain the rationale for deleting the original discussion which was highly critical of both the FAA and Continental.

Answer: The report when first drafted was provided by the Acting Manager, Situation Monitoring Staff, Western-Pacific (WP) Region (who was also in effect the coordinator or team leader of the inspection team) to the WP Regional Counsel to review and comment in preparation of the final report. The Regional Counsel transmitted the draft to the Chief Counsel in Washington.

Both the Acting Administrator and the Deputy Associate Administrator for Aviation Standards (at that time Mr. Broderick) had concerns about the subjective nature of some of the text of the report. Those concerns were relayed to the WP Director by Mr. Broderick. The WP Director passed that general comment on to the Flight Standards (FS) Division Manager. The FS Manager, in turn, asked the Situation Monitoring Staff Manager to call together the original team. This time frame would have been in early to mid-April 1984.

The team was asked to revise the report to delete subjective comments not in keeping with the guidelines they had initially been provided on report writing, but were not given instructions as to what specific material to delete or revise. The team members made some revisions, but not to the extent determined necessary by the FS Manager when he reviewed the report. The FS Manager, who ultimately was the individual responsible for "signing" the inspection report, instructed the SM Manager to make additional deletions and revisions to remove the subjective comments. The SM Manager in coordination with the Operations Supervisor from the Los Angeles Flight Standards District Office removed some additional subjective comments. This effort then became the final report. As indicated earlier to the Subcommittee, no findings were altered by the Region. The report was completed and signed by the FS Manager on April 20, 1984.

As noted to the Subcommittee during the course of the hearing, the material that was changed relating to the Check Airmen finding was either subjective in nature, not supported by factual material, or redundant. The basic finding itself was not changed. Significantly, it should be noted that, during the course of the initial report compilation, the SM Manager cautioned Mr. Langdon that some of the material he was drafting was not consistent with the guidelines the team members had been provided. It is also worth noting that it was subsequently learned by the FAA that the material concerning the purported violations of the check airmen regulations by Continental turned out not to be accurate when "hard copies" of Continental training records were reviewed by subsequent FAA inspectors. The computer listing reviewed by Mr. Langdon did not reflect this training, but an effort by others to validate the information contained in that listing by looking at the actual training records showed that the violations found by Mr. Langdon did not, in fact, occur.

17. Mr. Broderick testified that all of the findings and exhibits in the original report are contained in a Volume II of the final report.

a. Who made the decision to place part of the original report in a second volume, and what was the basis for this decision?

b. When was Volume II completed, and to whom was it released? In particular, was it released to Continental, and if so, when?

c. Why is there no indication in the April 20, 1984 report that there is also a Volume II?

d. Are there any other special inspection reports that have a similar Volume I/Volume II format, and if not, why not? If so, list the other reports.

Answer: The report was compiled in two parts in keeping with a Western-Pacific Region practice that had been in effect since approximately 1982. Volume II of the Continental Report was completed concurrently with the development of draft Volume I, and was forwarded to the Flight Standards District Office (and to FAA headquarters) on or about April 20, 1984, when the report was completed. Volume II of the report was not released to CAL in that it contained evidence and other investigative information considered to be an internal FAA document intended for possible enforcement action against CAL. Contrary to the assertion in the question, reference is made to Volume II exhibits throughout the April 20 report. As previously noted, the development of reports using the format of the Continental report is in keeping with the normal practice of the WP Region. Examples of other reports prepared in this manner are: Continental Report (1985); Western Airlines Report (1985); Air Resorts (1985); Go Leasing, Inc. (1984); Royal American Airlines (1984); and Air Cal (1983).

18. Mr. Broderick testified that the 1984 inspection team's enforcement recommendations were deleted because they were redundant of the findings of alleged violations of the Federal Aviation Regulations that Mr. Broderick testified were left intact.

a. The Subcommittee has been provided an FAA special inspection report on Western Airlines that contains recommendations to pursue enforcement actions. Why were these permitted to remain in the Western report but deleted from the Continental report?

b. What enforcement action did the FAA take against Continental as a result of the 1984 special inspection? To the extent that the 1984 special inspection team found violations, and no enforcement action was taken as a result of these findings, explain why.

c. Has Continental had any accidents since 1984?

Answer: The subjective comments in the Western Airline report should not have been contained in the report. They apparently were not caught during the regional review process. In terms of enforcement actions against Continental arising out of the 1984 inspection, a portion of the recent $402,000 civil penalty against Continental resulted from the 1984 inspection. Where violations were confirmed from the 1984 report, administrative or civil penalty action was taken. According to NTSB data Continental has had one accident since 1984. That accident occurred February 20, 1986, in Denver, Colorado. No injuries were sustained by the crew or passengers.

19. Who decided that Continental should not receive a NATI Phase II inspection despite deficiencies reported in Continental's pilot and flight attendant training programs, Check Airman program, and pilot qualifications training, and what was the basis for this decision?

Answer: Decisions concerning the scheduling of carriers for NATI Phase II inspections were made by a team of 9 regional NATI coordinators and 2 national coordinators. Continental had just undergone a detailed investigation so there was no rational basis for including Continental within the program so that it could be scheduled to undergo another detailed investigation.

20. Who directed that during a second special inspection of Continental Airlines (March-June 1985) that the inspection team, headed by William Ayton, was not to look into deficiencies in the Continental requalification and retraining programs and flight time limitation violations when deficiencies had been brought to the attention of the FAA by ALPA representatives, and what was the basis for this direction?

Answer: First, the question is incorrect in asserting that the inspection team did not look into flight time limitation violations. You will note that the issue of flight time limitation violations was, indeed, addressed in the 1985 report. In terms of the requalification and training programs, there was simply no need to include these for review by the inspection team since these deficiencies were already under investigation by the Western-Pacific Region, and an additional inspection would have been duplicative and unnecessary.

21. Mr. Broderick testified that the report of Arrow pilot Michael Sanjenis to the FAA on March 4, 1984 to "please, please hone in on Arrow to stop current company maintenance practices before an accident occurs" caused the FAA to do an in-depth inspection of Arrow Air.

a. Was the "in-depth inspection" mentioned by Mr. Broderick anything other than the NATI inspection that was already scheduled to take place? If not, does this mean that the FAA took no special action in response to Mr. Sanjenis' report of serious problems at Arrow?

b. Mr. Sanjenis reported that Arrow had "a continuing company policy of not fixing maintenance problems in aircraft but rather deferring maintenance items (DMI) for prolonged periods, placarding numerous MEL items without corrective action, and 'pencil whipping' maintenance discrepancies throughout the system." Mr. Sanjenis and former Arrow pilot Daniel Hood also testified to this effect before the Subcommittee. Why weren't these practices known to the FAA inspectors responsible for enforcing regulatory compliance at Arrow?

Answer: FAA inspected Mr. Sanjenis' aircraft at his specific request as a NATI Phase I inspection. When problems were found, FAA then scheduled for Arrow a NATI Phase II inspection, which had not previously been scheduled. In a recent (February 1986) in-depth evaluation of Arrow, we have not found the kinds of maintenance discrepancies referred to above. These deficiencies were, however, discovered during the NATI Phase II inspection performed in 1984. There is no adequate justification of which we are aware for the failure to find these deficiencies before 1984.

22. FAA inspectors had found a large number of violations of Federal Aviation Regulations at Arrow prior to the NATI inspections, for which no enforcement actions were filed. Mr. Broderick testified that this occurred "because of a thing called 'stale complaint.' It had been around for a long time, and the people had never done anything about it. In addition, although the NATI inspections revealed a large number of additional violations by Arrow, we understand that the FAA once again took no enforcement action against Arrow.

a. What are the steps in the FAA's enforcement process, and how was it possible for the complaints against Arrow to become "stale?"

b. Why were no enforcement actions brought against Arrow as a result of the NATI inspections?

c. Arrow management testified before the Subcommittee that the NATI inspection team's finding that Arrow had placed additional aircraft into service without revising most company manuals resulted from the FAA's failure to review such manuals which had been in the FAA's office for many months awaiting approval. What is the FAA's response to this testimony?

Answer: The enforcement process essentially consists of an investigation by a safety inspector who is responsible for preparing an Enforcement Investigation Report (EIR). The EIR contains evidence that supports the finding of a regulatory violation. The inspector proposes a sanction, which, along with the EIR, is reviewed by the inspector's supervisor and by regional flight standards personnel. The enforcement package is then forwarded to the regional counsel for the initiation of legal action. In the cases cited, the enforcement actions became "stale" because of the failure of the inspector personnel to take appropriate action in time. (See 49 C.F.R. 821.33.) With respect to the fact that there were no enforcement actions arising out of the NATI inspections, this occurred because the region concluded that the corrective measures instituted by Arrow adequately addressed the problems. In terms of the Arrow testimony to the effect that they placed aircraft into service without revising manuals because of FAA slowness in reviewing manuals, this is not a valid excuse for failure to follow the regulations.

23. Mr. Broderick testified that after the NATI inspections, Arrow's "compliance was good, and remained good." However, subsequent FAA inspections of Arrow, including the recent special inspection, have continually revealed additional deficiencies and violations in Arrow's operations. In view of this, how does the FAA explains Mr. Broderick's statement, and why, despite numerous inspections, is Arrow apparently unable to obtain a "clean bill of health" from the FAA?

Answer: At the outset, it is important to note that the FAA does not issue anything akin to a "clean bill of health" other than the air carrier operating certificate. If the FAA permits an air carrier to continue operating pursuant to its air carrier operating certificate, that is notice that the FAA believes that carrier is operating consistently with FAA requirements and, hence, safely. It is also important to recognize that, because of the scope of operations conducted by most carriers and the magnitude and complexity of the safety regulations administered by FAA, it is rare that an in-depth inspection by the FAA would not reveal some violations of the agency's regulations. This is not to excuse such violations, since we expect absolute compliance, but is recognition of the reality of any comprehensive regulatory compliance program.

24. The Special Inspection Report of Arrow Air dated February 21, 1986 cites Arrow for a number of practices not in compliance with the Federal Aviation Regulations:

a. Arrow management testified before the Subcommittee that "at the conclusion of the inspection team's oral briefing, the manager of the FAA's Flight Standards for the Southern Region stated that the inspection team did not find any deficiencies of sufficient nature to conclude that Arrow was an unsafe airline," that the published report presented "an entirely different perspective than that which had been conveyed to us at the oral briefings." and that "the written report was dated February 21, five days prior to the date of the oral briefing, at which time the FAA told us that no written, final report had been completed." What is the FAA's response to this testimony?

b. In the report, the FAA cites Arrow for installing aircraft parts obtained from foreign air carriers which were not maintained or approved for return to service by persons authorized by the Federal Aviation Regulations. At the Subcommittee's hearings, Arrow management testified that Arrow had been using the parts for over two years with the FAA's knowledge and consent, and that FAA bulletins admit confusion in the area of record-keeping for parts obtained from foreign sources. What is the FAA's response to this testimony?

c. The report states that "(c)old weather operation, ice removal procedures...(are) contrary to Section 121.629(b) of the FAR. The GMM states that one-eighth of an inch of frost is allowed on the lower wing surface." Arrow management testified that every other carrier in the U.S. has this policy, and that it is specifically permitted by an FAA advisory circular. What is the FAA's response to this testimony?

Answer: With respect to the Arrow statements noted in subquestions (a) and (b), we have no basis to explain their testimony, and do not agree with the thrust of their representations. In terms of the discussion concerning ice removal procedures, it is simply inaccurate. The FAA does not permit 1/8" of frost on the entire lower wing surface, but only on that portion between the ribs underneath the fuel tank. This is a major distinction in the treatment of ice removal.

TESTIMONY OF CLARK H. ONSTAD
VICE PRESIDENT, GOVERNMENTAL AFFAIRS
CONTINENTAL AIRLINES
BEFORE THE
U.S. SENATE PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
HEARINGS ON AVIATION SAFETY[1]

I want to thank the Subcommittee for the opportunity to submit this statement. Unfortunately, a prolonged illness prevented my appearance at the recent hearings. My background encompasses 18 years in aviation including work as an aviation economic consultant, an attorney specializing in aviation law, tenure as the Chief Counsel of the Federal Aviation Administration from August 1977 until January 1981 and, beginning in October 1982 employment as a Vice President of the Texas Air Corporation and Vice President, Governmental Affairs, for Continental Airlines.

The testimony will focus specifically on the allegations of Mr. Langdon in his role as former team leader of the FAA's 1984 inspection of Continental Airlines. There are essentially six points that I would like to develop. First, Mr. Langdon is legally wrong in his allegations concerning the use of check airmen at Continental Airlines; Continental's documented response to these charges has been on the public record for well over a year and there has been no rebuttal. Second, the allegations that Continental's actions in any manner derogated safety are wholly inaccurate; the pilots used to provide checks at Continental had an average of 19 years experience with Continental. Third, Continental had proper FAA approval for its training procedures. Fourth, the basic predicate of Mr. Langdon's charges is that the work of the FAA team should not be subject to review and change by superiors upon a showing of good cause; this proposition is antithetical to a valid technical investigative process. Fifth, Continental had unprecedented incentive not to cut corners during the period in question owing to the Airline Pilots Union (ALPA) using safety allegations in their strike effort against Continental. Sixth, the basic problem which this Subcommittee should address is the FAA's lack of resources to conduct investigations in a thorough manner.

---

[1] The exhibits accompanying Mr. Onstad's statement have been retained in the subcommittee files.

In sum, I firmly believe the reason the FAA team reached certain incorrect conclusion is that it was not given adequate time or resources to complete its work in a thoughtful manner; moreover, there was not adequate follow-up conversations between the team and Continental officials.

Continental is ready to answer any and all questions that might be raised concerning the safety of its operations. Indeed, Continental filed a 3-inch thick response to the findings of the 1984 FAA team. In that report, Continental admits, that, despite a tremendous emphasis on safety, not having complied with all facets of the FAA regulations. However, the basic point which cannot be overlooked is that Continental has operated at a level which is as safe or safer than any other major U.S. air carrier.

I. The FAA's 1984 Investigation

Beginning in February 1984, the FAA assigned a team of approximately 10 individuals to conduct an overall inspection of Continental Airlines. The team took approximately two to three weeks to perform its on premises investigation. The team itself was drawn from the various regions of the FAA and augmented by staffing from the Western Region. This group of people had never previously worked together as a team. There were no lawyers assigned to assist the team. After the team's on-site work was completed, they wrote a report and, while the report was in process, the relevant Continental Airlines officials were debriefed. After completing their report, the team turned it over to the Western Region and disbanded. To our knowledge, the team never had any legal or substantive review of its work prior to turning it into the Western Region.

It is important to focus on the enormity of the task presented the FAA team. At that time, Continental conducted flight operations to such varied places as Australia, Guam and Boston, serving a total of 62 cities throughout the world. Continental was operating approximately 361 daily departures. Maintenance was being performed in Los Angeles at Continental's $50 million principal maintenance base and at Denver and Houston.

In addition, each air carrier's system of conducting its operations is different. Procedures and record systems have built up over the years, using the flexibility that is built into the FAA regulations -- flexibility that is essential to the varied demands of aviation safety.

The task that confronted the FAA team members is one that should have involved six months, not two to three weeks. Appendix A consists of copies from the team's report of the actual inspections performed. It is concrete evidence of the degree to which the team was stretched.

II. Continental Correctly Utilized Check Pilots and Check Airmen

Attached to this testimony are approximately 100 pages of responses to the FAA team's findings on check airmen (Appendix B). These responses have not been refuted and they copiously document that Continental utilized an FAA approved program that conformed to the regulations. I will not dwell further on this subject but only invite the Subcommittee to study the facts for themselves.

III. The Allegations That Continental's Actions Derogated Safety In Any Manner Are Wholly Inaccurate

Continental's flight training program that was reviewed by the FAA team was conducted under the supervision of Mr. Donald J. Breeding, Vice President-Flight Operations (a 13-year company veteran) and Mr. Robert

Lemon, Sr. Director-Flight Standards and Training (a 21-year company veteran with 12,000 flight hours). (See Exhibit C). In addition, there were five chief pilots. At the time, these individuals had been with Continental for 17 to 20 years and had 7,000 to 14,000 hours of commercial airline flight experience. (Exhibit C). Aiding the chief pilots were 7 assistant chief pilots whose tenure at Continental ranged from 14 to 18 years and their flight time in commercial service ranged from 6,000 hours to 15,000 hours. (See Exhibit C).

The pilot training staffs were also long-time company employees with substantial flying experience. There were 38 check airmen whose tenure with Continental averaged 19 years and their average commercial airline flight time was 8,300 hours. In short, the training staff at Continental Airlines was highly proficient. Many of these individuals had been in the pilot training program for years and years in the very capacity that Mr. Langdon took issue with.

There is another implication in Mr. Langdon's allegations that I want to address - that we were hiring significant numbers of relatively inexperienced pilots. At the time of the FAA inspection, Continental was being struck by ALPA. Continental hired from an unprecedent pool of talented pilots. Over 14,000 properly rated pilots applied to work at Continental. These individuals were meticulously screened. Continental's standards were so high that less than 4% or 1 in every 30 individuals was being selected for Continental's training programs. Continental was not hiring anyone who had less than 2,500 hours of flight experience and the average of the pilots hired was in excess of 4,500 hours of flight experience. To add perspective, Continental underwent a major expansion in 1967-68 timeframe. The average experience of pilots hired then was approximately 2,000 flight hours, mostly in the military with little or no commercial experience. In that time of expansion, the pilots went from just joining the company, through first and second officer to captain positions in less than three years. At the time of the FAA inspection, Continental's junior captains had been with Continental for over five years.

Continental was operating its pilot training program with a remarkable degree of supervision and virtually unprecedented levels of experience.

IV. The Basic Premise Of The Allegations Is That The FAA Team's Work Product Should Not Be Subject To Review

When all of the allegations are boiled down to their essence, the basic predicate is that the FAA team's work should not have been subject to review and change for good cause. This is simply an untenable proposition. I cannot think of a similar example within the federal government where a field investigation's work not being subject to review. To use a perhaps even more graphic example, newspaper reporters are routinely subject to review and challenge by their editors.

There are several fundamental questions raised by this no-review proposition. Why, for example, did the team itself not bring the specifics of their allegations to Continental to test their results? What safety objectives were advanced by a process that demonstrably only gets a part of the story accurate?

It should be remembered that an FAA safety investigation is a technical investigation. It depends upon a full explication of the facts, a testing of hypotheses and, a cohesive overview. The FAA team's "no review" perspective is simply contrary to standard, tried and proven technical/scientific investigative methods.

V. There Were Unusual Circumstances At Continental That Strongly Militated Against Any Slippage in Compliance With Federal Aviation Regulations

Under normal circumstances, air carriers do their utmost to ensure compliance with FAA regulations. During the period in question, Continental even had an extra incentive.

On September 23, 1983, Continental Airlines filed for reorganization under Chapter 11 of the Federal Bankruptcy laws. On October 1, ALPA struck Continental vowing to bring the carrier to its knees, using charges of unsafe operation. ALPA took out newspaper ads alleging safety violations at Continental and, they began a massive campaign of reporting alleged safety violations at Continental. Furthermore, ALPA launched a $1 million public relations offensive, using safety charges as the base, that included stimulating interest in Continental by such programs as 60 Minutes and 20/20.

In this environment, Continental knew that it had to be as strict as humanly possible to prevent giving ALPA even the color of an excuse to detract from the reputation of the airline. Continental devoted untold manhours and financial resources to ensuring that it was running the safest possible operation. At the same time, Continental was the most inspected airline in America. Over 2,000 inspections were performed by the FAA.

It simply is not credible to assert that Continental would knowingly violate Federal Aviation Regulations.

VI. The FAA's Lack Of Investigative Resources Are the Real Root Cause Of the Unfounded Allegations.

At the outset of this testimony, I described the formidable task facing the FAA team. This group of dedicated individuals simply needed more time, better procedures and more resources, including legal support, in order to conduct a proper investigation. Unfortunately, the FAA inspectors' workforce suffers from two problems - they are understaffed and, they are underpaid. As to staffing, there are not a significantly greater number of FAA inspectors today than there were in 1960. But yet, there are a substantially greater number of air carriers. On the matter of pay, I have been advised that there are approximately 10 times more senior executives service positions at NASA as there are at the FAA. But yet, the FAA is responsible for overseeing the safe movement of tens of millions of passengers each year. The FAA has a particularly hard time competing for experienced personnel in a time of commercial aviation and defense expansion. It cannot be stressed enough that the FAA's role is that of deciding whether or not a particular item is safe. This is a task that requires experience and judgment -- talents which the FAA all too often cannot afford at existing pay levels. This is especially true in high cost areas such as Chicago, Los Angeles and New York.

In addition to the personnel question, there is the issue of procedures. There is no reason why the FAA team should not have worked with Continental until both sides could have agreed as to the areas of legitimate controversy. No public purpose was served by the FAA team not having presented its draft findings to Continental for input. Many misimpressions and erroneous conclusions could have been eliminated. There is also no reason why lawyers should not have been assigned to the team. All too often the issue was and is one of regulatory interpretation which lawyers are particularly skilled to deal with. Lawyers would also be helpful on the issue of proof -- has the team assembled reasonable proof of a violation?

With these areas remedied, it would appear that aviation safety would significantly be advanced.

* * * * * * * * * *

In conclusion, I want to thank the Subcommittee once again for the opportunity to present this statement. Continental stands ready to answer any and all questions that the Subcommittee may have.

AFFIDAVIT
OF
WILLIAM T. GATES

I, William T. Gates, of Haymarket, Virginia, freely and voluntarily make the following statement to Glenn W. Fry, who has identified himself to me as a staff member of the United States Senate Permanent Subcommittee on Investigations of the Committee on Governmental Affairs.

My career in the aviation arena spanned forty-one years and included twenty-six years with the Army Air Corps and the Air Force as a pilot for the Military Airlift Command. During the military I served as a transport pilot, a check airman, chief pilot and flight instructor. The final six years of my military service were spent at McGuire Air Force Base, New Jersey, where I was responsible for the periodic performance evaluations of over twenty air carriers that were under military contract. During this period, I worked closely with the FAA and my responsibilities included supervising concurrently with the FAA surveillance of contract air carriers' operations.

I retired from the military in 1968 and in January 1969 I went to work for the European Region of the Federal Aviation Administration as a member of its SWAP team. The SWAP program established surveillance of the world-wide operations of PanAm, TWA, Overseas National and Seaboard World Airlines. My six years in the SWAP program culminated in an assignment (1½ years) as the assistant principal operations inspector for PanAm in the International Field Office of the FAA. I subsequently took an assignment in Washington, D. C. at FAA headquarters in the Air Carrier Regulations Branch as a project manager. Here, I wrote revisions and exemptions to FAA regulations. I retired from the FAA in January 1982 and took employment with the International Civil Aviation Organization (ICAO), a branch of the United Nations, in Saudi Arabia for two years as a Principal Operations Inspector for its foreign air carriers where my responsibilities included surveillance of flight standards operations. My last six months in Saudi Arabia I served as the principal operations inspector for Saudia, the national airlines of Saudi Arabia. I finally retired from aviation work in April 1984.

In October 1984, the Air Carrier Branch of FAA headquarters inquired as to my availability to participate as part of a task force to evaluate the findings of the recent National Aviation Transportation Inspections (I and II) reports. Our instructions were to evaluate the discrepancies found as a result of the NATI inspections. My specific area of responsibility was to evaluate the findings which related to air carrier operations. The entire task force was comprised of retired FAA inspectors. My understanding was that the FAA selected retired personnel in order to conserve valuable resources and to obtain objectivity.

My overall impression of the NATI I and II findings was that due to the rapid expansion of the air carrier industry and the decrease in the number of FAA inspectors the stage was set for an increase in operational discrepancies which could decrease the level of safety maintained in the industry. It has been my experience that the FAA, in the past, was capable of staying abreast with its surveillance responsibilities during normal periods of industry growth; however, after deregulation there was rapid industry expansion and it was virtually impossible for the FAA to conduct comprehensive surveillance programs. Since deregulation and with the rapid growth of the air carrier industry, the workload for an FAA operations inspector became overwhelming. An inspector no longer had the time to scrutinize manuals, records and conduct thorough physical inspections of equipment. As an example, prior to deregulation a principal inspector had responsibilities to one air carrier - following deregulation his responsibilities doubled or tripled.

A new air carrier setting up initial operations scheduled suspension dates to have the certification completed. FAA management encouraged inspectors to accommodate these new air carriers and the inspectors made every effort to meet air carrier deadlines; however, in doing so, they were unable to provide comprehensive inspections to all areas of the carriers' operations.

Many areas slipped by an inspector's scrutiny during this period of rapid expansion whereas before deregulation this was not the case. For example, the review of an operator's manual can be very time-consuming. During the certificating process the time that an inspector could devote to the review of an operator's manual was shared with his many other responsibilities, such as routine correspondence, surveillance and mounds of paperwork. Consequently, inspectors simply could not address, in detail, the fitness of a carrier's operation manual. This scenario was true with the review of other areas in the certification process, such as training, crew proficiency, and proving runs which are like dress rehearsals. Since deregulation, smaller and intermediate airlines came on to the scene demanding certification action so they could commence operations. Some of these operations were run by personnel without extensive aviation or air carrier experience. Many also were very unfamiliar with FAA regulations and procedures. Therefore, such companies were incapable of properly preparing for certification causing the FAA to use its inspector force to do this work for them. Once in operation, air carriers' inexperience was a factor in their inability to adequately monitor its day-to-day operations. The inspector force was not able to provide the detailed attention to these matters; therefore, discrepancies and violations tended to go undetected or unaddressed.

Also, larger airlines, in order to compete in the free enterprise environment, changed or expanded their routes and schedules. Each time a change is made, the FAA has the responsibility to examine and approve the carriers' new operations. This was many times impossible to do. This type of oversight was previously the function of the Civil Aeronautics Board. After deregulation, it became an additional responsibility of an already decreasing FAA work force.

In 1980 the Secretary of Transportation, in ~~a~~ his report to Congress, stated that the surveillance operations of the FAA would increase. Since 1980, enforcement actions initiated have decreased substantially each year. The number of air carriers today is such that it is virtually impossible to inspect all facets of an air carrier's operation. Also, the "geographical area concept" placed a large demand on inspectors' responsibilities. Airline routes have changed since deregulation. Carriers are operating different routes than before in order to compete in the free enterprise system. The FAA has difficulty surveilling air carriers that are certificated in one Region and operate mostly elsewhere. FAA resources are allocated where the certificate is located. Inspections of operations that are transient in nature relative to an inspector's base does not receive the best quality control. It is difficult to follow up on inspection findings and the tendency is to focus attention on those local operations within an inspector's home base. Therefore, much can go on undetected and unresolved which, in the worst light, can mean non-compliance and unsafe conditions.

The enormous growth of the air industry since deregulation made it extremely difficult for an inspector to maintain a familiarity with the different airline operations and ever changing technology. Unfamiliarity with operations can easily result in an ineffective surveillance program. For example, an air carrier might be in accordance with Federal Aviation Regulations (FAR's); however, the inspector, because he has lost a familiarity, might lack the current knowledge of that particular type of operation; consequently, the inspector is incapable of policing that particular air carrier.

In 1967 the FAA initiated a Systems Worthiness Analysis Program (SWAP) team concept. The SWAP concept was an inspection procedure wherein teams within a region inspected and evaluated the air carriers who were certificated in that region. Previous to the SWAP concept, the respective principal inspectors answered to no one. SWAP provided a different set of eyes in which to examine airline operations in order to insure compliance. As a fall-out of the SWAP concept, the FAA's performance can be gauged. The SWAP program created a certain amount of resentment from FAA principal inspectors; however, it proved to be a worthwhile exercise. Unfortunately, in my opinion, FAA headquarters did not adequately encourage the principals to implement or correct the SWAP findings.

Since the rapid growth and change in the air carrier industry, there seems to be a growing need for specialization in the FAA inspection force. There was a time when inspectors were doubly and triply qualified; however, today that is not adequate. With the increased workload and decrease in personnel, air carrier inspectors were spread thin. It was not realistic to expect inspectors to maintain multiple proficiencies with the advent of so many different types of air carrier equipment, particularly in light of the steadily decreasing work force as well as the lack of inspector training funds available.

Recurrent training appears to have suffered due to continuous budget constraints. Recurrent training is highly desirable. An air carrier inspector should be qualified and current with the state of the art if they are to determine the proficiency of air carrier personnel -- not to mention gaining the respect of air carrier personnel. Without recurrent training and with the inspection force spread so thin, it is not long before an inspector loses a level of proficiency.

Training is becoming more and more vital due to the influx of newer FAA personnel. Many of the newer personnel do not have the extensive military and commercial experience that was once prevalent throughout the FAA. Moreover, the actual numbers of qualified people available to work for the FAA is smaller because with the recent growth of the airlines industry, a good portion of the qualified aviation personnel work for industry. Lately, I have noticed a trend where FAA personnel leave the government to work for industry.

FAA training qualifies most inspectors to identify violations; however, due to such a shortage in personnel, there is an obvious insufficient presence of FAA inspectors. This is borne out by the numerous discrepancies and non-compliance items which were highlighted by the NATI inspections. There seems to be an insufficient presence simply because the number of inspectors is not adequate to examine the increasing number of airlines. Therefore, there is a certain amount of reliance upon air carriers to voluntarily comply with the letter of the law without FAA presence. Again, the report's findings suggested that air carriers were not meeting ~~its~~ their 3/10/86 responsibilities which are required under the FAA Act of 1958.

The number of enforcement actions taken by the FAA over the years has declined. It was difficult as an inspector to allocate time to follow up on inspection findings or violations. This was due to other priority work, the transient nature of the equipment and the fact that there was not enough time or people to make such follow ups. Many times the records of an air carrier were at one place but the equipment was located elsewhere, therefore making it very difficult to confirm whether or not deficiencies were corrected. The lack of available inspector travel funds also contributed to the inability to follow up on inspection findings.

It was my opinion that only a small percentage of enforcement actions culminated in violations. Reasons for this include insufficient documentation by the inspectors of incidents of non-compliance and an overburdening amount of work for legal counsel. I believe a greater enforcement emphasis by field inspectors is necessary and this could be attained with an increase in the number of inspectors and lawyers. Enforcement, today, does not have the deterrent effect that it had prior to deregulation. Legal counsel, many times, negotiate settlements with air carriers rather than pursue violations through the courts. Disposition of violations is a time-consuming process that may take months or even years. Inspectors are frequently never apprised of a case's ultimate disposition. Such feedback is helpful to inspectors as a learning tool, as well as a morale factor.

The airline travel will become more and more unsafe unless attention and corrective action is provided to the FAA's areas of ineffectiveness. The industry has grown and changed, yet, the government's regulatory body has not kept pace. The FAA has many highly qualified and competent personnel, yet more funding and resources are necessary to enhance their effectiveness. The FAA has, historically, operated efficiently and effectively. It still has that potential capability but, to do so, requires necessary reform.

#

I have read, reviewed, and initialed each page of this statement and I swear, to the best of my knowledge and belief, that the statements contained herein are true and correct.

William T. Gates
William T. Gates

Sworn to and subscribed before me
this 10th day of March, 1986.

Lois M. Thwaite
Notary Public

My commission expires Aug. 25, 1989

AFFIDAVIT
OF
MERLE HOTTENSTEIN

I, Merle Hottenstein, of Ocean Shores, Washington, freely and voluntarily make the following statement to Glenn W. Fry, who has identified himself to me as a staff member of the United States Senate Permanent Subcommittee on Investigations of the Committee on Governmental Affairs.

I retired March 2, 1984, as Supervisory Air Carrier Operations Inspector in NM-FSDO 61, Seattle, Washington, after almost fourteen years as an Inspector of Air Carrier Operations. I had extensive General Aviation experience as a pilot during over ten years in FAA Airways Facilities Flight Inspection, followed by two years as an FAA Administrative Pilot at Hangar Six, Washington National Airport. Prior to Flight Inspection, I was an Air Traffic Controller, both Terminal and Enroute.

My career in aviation began as a U.S. Navy Pilot during World War II, continuing in the Ready Reserve for over eighteen years, logging approximately five thousand military flight hours. For over twenty years I was part owner of a light aircraft (Cessna 182) used for personal pleasure flying. A limited amount of commercial experience was gained from 1945 to 1956 as a part-time air taxi charter pilot. I hold an Airline Transport Pilot Certificate with type ratings in DC-3, G-159, B-707, B-720, B-727, and B-737, Certified Flight Instructor Rating for Aircraft and Instrument, Flight Engineer Rating with Turbojet Powered Aircraft. My total flight time is approximately seventeen thousand (17,000) hours.

As an Air Carrier Operations Inspector (ACOI), I was involved in the certification of several Air Carriers under FAR 121, Air Travel Clubs under FAR 123 and Air Taxis using large aircraft under FAR 135.2. Although deregulation substantially reduced much of the financial and operational burden on the applicant, as well as the time involved from Letter of Intent to final certification, inspector involvement increased to the point that he was not able to do any other duties that required traveling, so he was usually assigned to certificate two or more applicants concurrently. This assured that he would be available to work with the applicants as each stage was being completed. The FAR's limited the amount of time the FAA was allowed to accept or reject manuals or progressive stages of certification. Not meeting these time deadlines was construed as tacit approval and this was sometimes used by applicants to their advantage on important stages, especially if they were weak in that area. Training should not commence until manuals are approved because any changes made to the manuals then requires additional training to cover the changes which usually results in negative training. Any delay attributed to the assigned inspector, real or fictitious, usually results in complaints to FAA management in the region or headquarters and/or, worse yet, to their congressman. Then, additional time is lost answering inquiries or defending a position taken. Since the pace is set by the applicant's personnel qualifications and financial status, it is often feast or famine for the assigned inspector even though handling multiple applications. Sometimes progress seems to stalemate at various stages and then try to make up for lost time. Certain stages of certification require coordination between offices, even in other regions, for qualified inspectors to review manuals, training requirements, operational capabilities, etc. Most FAA field offices are pretty well standardized and inspectors work together quite well and each knows what is required, but there is a problem from one region to another. Applicants soon learn which regions tend to be lax and which are thorough and they plan accordingly. The training of the ACI's is standardized but the final word is up to the regions. With field offices, being short-handed, the inspectors have a tendency to be overly strict rather than allow anything unsafe to slip by. My experience has been that the more thorough the certification process and follow-up surveillance is, the fewer times inspectors are called upon for accident, incident or violation investigations, which is a higher priority than certification and, therefore, disrupts the continuity of certifications. Assigned inspectors are more vulnerable for these investigations due to limiting itineraries in order to be available in the office for various phases of certification.

Airline expansions usually involve the acquisition of larger or more complex aircraft which often requires interoffice, even inter-region, coordination to locate inspectors rated for these aircraft. Ground training, simulator checks and aircraft checks are sometimes scheduled concurrently, which requires more inspectors with that specialty than are available in the certificating field office. Dedicated inspectors in the field are quite adamant that applicants that do not fully comply with the certification requirements of the FAR's not be permitted to commence operations until they fully comply. Political pressures, sometimes local field office or region, sometimes from Washington, have been used to get FAA to accept "promissory notes" to allow them to commence operations with a promise to complete compliance later. My experience has been that this is difficult to control because the next step is political pressure applied again saying, "if it was safe then, it is no less safe now", and call attention to the scope of FAA is to assure aviation safety. Legal decisions tend to follow this concept. The inspector is frustrated by this because it may not be unsafe to commence operations but does not fully comply with the regulations. If the regions would require an exemption or a waiver, as applicable, prior to commencing operations, it would raise the question so that higher authority would make the decision rather than the assigned inspector. This would prevent "Monday morning quarterbacks" asking "why did you let them start without full compliance?"

Surveillance is done as a very low priority on a catch-as-catch-can basis due to shortage of qualified inspectors. Geographic area concept went out with the advent of jet aircraft. Locally domiciled flight crews fly routinely through several FAA regions. Training is often concentrated in geographic areas such as Denver (UAL, FAL), Los Angeles (WAL, Air Cal), Seattle (Boeing, Alaska Air Lines). These field offices need additional inspectors to adequately monitor these facilities plus their other job functions.

Spot check surveillance is done presently in the course of travel to and from Oklahoma City or other facilities for inspector proficiency training.

This does not assure that surveillance is done where and when it is needed. Often complaints are received because some pilots feel "picked on."

With properly trained and experienced inspectors there is a sixth sense for danger signs as they observe the line and station operations of air carriers, but time usually does not permit a change of itinerary to investigate further or play a hunch on the spot and the problem may disappear before getting back to it later. The inspector is not derelict in the performance of his duties; he is just spread too thin and has too many demands on his time. He always has things that "should" be done but time does not permit but a very low percentage of them.

The SWAP team concept was a step in the right direction but cost, together with timing of fuel shortages and allocations, rough times for the air carriers and the push toward deregulation soon brought about "ad hoc SWAP inspections" on an "on call" basis. Even this has become a thing of the past due to the cost of keeping a "team" trained and ready for when indicators show they are needed. A specialized team is needed to be available now to conduct SWAP type inspections, especially the "new kids on the block," the carriers that started operations right on the heels of deregulation. It is my opinion that we are on the verge of a series of major air carrier disasters if some action is not taken to conduct an in-depth inspection of training and maintenance and records. It is evident from recent action taken through FAA Airworthiness directives as a result of spot checks on maintenance on Boeing 747's. FAA inspectors do not ordinarily make these inspections unless they suspect through records inspections that the carriers are not providing adequate inspections.

ACOIs receive very good initial and recurrent training whether at Oklahoma City or through contracts put out for bid with major carriers. It is a very good means for observing a carrier's training programs, the quality of training and the effective use of training aids.

Each inspector undergoes training every six months and since most are at least dual qualified, they alternate aircraft each time. Recurrent training usually involves a full week of ground, simulator and aircraft training culminating with an annual proficiency check that is the same as air carrier captains take. These are always given by qualified FAA inspectors which adds to the local office work load. This training keeps ACOIs abreast of how it feels on the other side of training situations, which can be a humbling experience.

The formal training of an ACOI is well above average but OJT is not what it should be to gain experience on the job because long-time inspectors do not have the time available to train new inspector trainees so they have to learn from their own experiences, which is a very slow process, usually involving over two years and the quality of the training is questionable because during this period the trainee has developed poor scheduling habits and probably learns a lot of lessons the airline wants them to think are important to his job but are really just smoke screens. The FAA places new inspector trainees in a compromising position sometimes by sending them on surveillance before they are ready and they unknowingly allow violations to be unnoticed. Industry then decides they are either stupid or that they are selective about which regulations they will enforce. Either way, it is bad for FAA and for the inspector.

The Government continually trains young inspectors just enough so they can get hired by the airlines. This is bad because the trainee is not going to do anything during his tenure as an inspector that would jeopardize his chances for a job with a higher paying future. This has been a "catch-22 situation" for the FAA for years. Despite a lot of opposition, a solution would be to hire military trained pilots and airline pilots that have had medical problems that preclude them passing a first class medical. FAA inspectors only need pass a second class medical. I believe both would make excellent air carrier operations inspectors.

There is definitely a real need for specialization among air carrier inspectors but it must be done right, which will take additional money. At a time when inspectors were under pressure to keep up with airlines with jet aircraft, new types of electronic navigation systems, security training dealing with bomb threats and hijacking, etc., along came new types of simulators and training programs. Initially, all inspectors had to do the best they could with feedback from the ten percent of them that were sent to a special course in the approval of simulators. Next, inspectors having had the training were the "specialists" and did all field approvals under the watchful eye of Washington headquarters personnel. Then, simulator approvals and evaluations were taken from field offices and even the headquarters staff moved their operation to Atlanta and an empire was built. The money used to set up and train this team of simulator specialists from the field was taken from the Flight Standards much needed budget and the field offices suffered with even the threat of reduction in force (RIF) proceedings. There were a lot of hard feelings in the field over the way it was handled. Major changes in the field should be funded directly and independent of the regular budget.

Human nature dictates that suspected violations of minor nature will not be pursued by an inspector if he is swamped with work assignments already. It is probably better that way anyhow because he would not be able to take the time to do a thorough job preparing the paperwork and, therefore, he would be criticized by the region, especially legal, for starting action in the first place. Experience has shown that they are often reluctant to take action beyond a certain point even though it is very thorough and well prepared. Their initial reaction is to encourage the inspector to "go for broke" but when it comes down to the final analysis, they are reluctant to press charges too far if they are going to have to face the airline's legal force in court. This discourages motivation in the inspectors to prepare other than the most serious because too often it is just a "make work" effort. The attitude of some inspectors is that the purpose of violations is to get corrective action taken through training or record keeping that precludes a recurrence so they resort to a Warning Letter and close it out without involving legal action. This has a lot of merit but this does not get it into the official record of the airline or the individual and is local knowledge only.

When I retired, there did not appear to be any sort of standardized enforcement from region to region. Areas that had enough inspectors to devote time to this job function, there would be more enforcement action taken than areas that were short-handed. Few violations are evident on the surface but an inspector doesn't have to dig very deep to find all he can handle if he knows what to look for and follows hunches or suspicions. Once a violation has been detected, an inspector has no choice but to follow up to insure corrective action and compliance. The system is designed to guarantee that. There is a lot of prejudice and political pressure in the administering of sanctions, therefore they are sometimes not adequate to encourage future compliance. Experienced inspectors sometimes use their own type of pressure on the crews involved by threatening certificate action on pilot's certificates if they knowingly yield to pressures from airline management to violate or bend a regulation because the carrier willingly pays the fine "if caught." That method worked for me on several occasions.

The number of properly trained, formal and OJT, inspectors has not kept pace with the growth in number of airlines, new equipment coming on the scene involving formal initial training which takes inspectors from their normal job functions and other work responsibilities which have increased, such as enforcement actions, accident/incident investigations and special strike surveillance. The ACOI Handbook lists all the job functions an inspector should be doing routinely. Time and money only permit about twenty percent of these being accomplished with the present staffing because no provision has been made to cover vacations, illnesses, retirements, deaths, transfers, etc. When our office had thirteen inspectors we were about 85% to 90% accomplishment, but at eight inspectors with increased demands it dropped to about 20%. My guess is that there are many captains that have not been observed on the line for four years or more. The Handbook suggests at least once annually. It takes a concerted effort to see some for various reasons. Ground training of flight crews and almost all flight attendant training is getting very little attention by inspectors.

One of the demands on an inspector's time is the Standard Program for Uniform Reporting (SPUR) which allows regions and headquarters to prepare statistics for staffing. Most SPUR items are demand items which means they are initiated by industry on an as needed basis, therefore the inspector is a slave to their demands rather than having flexibility on making his own work schedule or itinerary. Enough data was obtained to serve the purpose of SPUR years ago except that the complex reporting system kept changing forms and never seemed to satisfy management. There is no room in the system for good public relations a good visual profile by just visiting air carriers and observe routine operations. Most job functions of an ACOI require considerable travel from time to time for training, surveillance, inspections, investigations, etc. Toward the end of the fiscal year, the travel funds run short and travel is curtailed or drastically reduced. The inspector loses a lot of his momentum during this time, not being able to follow up on enforcement actions, etc.

I have a very high regard for FAA Airworthiness Inspectors' expertise. Usually, years of experience with industry is required to get the job and it is important they have the respect of the industry to be effective in their job.

Generally, the expertise of industry maintenance personnel is very high also. They are professionals and realize how important their job is to safety. The quality of contract maintenance and services depends largely on the personnel involved and it is very important for the PMIs of each carrier involved to discuss the arrangement at length with each other to be sure neither carrier is abrogating good maintenance practices. The Operations Specifications must be specific as to who can do what for whom and then require close surveillance by both operations and maintenance inspectors at every opportunity. The cross training of industry personnel is usually the trap most airline maintenance and service agreements overlook and lose their quality control, therefore each PMI must make sure the maintenance procedures and practices in the manuals are complied with regardless of who does the work. Even though a procedure is approved for United Air Lines' aircraft does not mean it can be used on American Air Lines' aircraft if it is contrary to American's maintenance manual, Operations Specifications or any special procedure approved by American's PMI. This is very important prior to approval of interchange agreements between airlines using each other's aircraft. The only way, outside of SWAP, to be sure a carrier is in compliance in record keeping, manuals, expertise of management and personnel, condition of equipment is to routinely program inspections at regular intervals. The POI cannot do it alone if it is a major airline. An inspector can get a feel for the urgency of a need to do an in-depth inspection by spot checks occasionally, especially on a major carrier. He knows if the morale is high, evidence of professionalism is prevalent, appearances are maintained at a high level and past experiences have shown they are dedicated to aviation safety then it is not as important that he take the time he would need if there are jurisdictional disputes between departments, log books and forms are sloppily prepared, equipment is in various stages of disrepair with no real direction or purpose, plus an unusually high number of deferred maintenance items in the log book even when leaving a major repair base. Running the gamut of major airlines, there is no substitute for experience in detecting financial stability problems and potentially unsafe practices by an inspector in the field.

Since FAA is a service organization with no product to sell, their overall efficiency and effectiveness is an ongoing thing. Any interruption due to budget restraints, new policies, unforeseen circumstances such as involvement in a major accident, investigation or even the assignment of additional duties such as the financial audit of carriers or other duties previously performed by the CAB, set the efficiency and effectiveness back considerably unless the where-with-all (money) is up front prior to implementation, otherwise it is a continual game of "catch up." The whole program falls through the crack and has to start from scratch after each crisis if major changes are implemented prior to providing the funds. A way to do it would be to assign the funds directly to FAA Flight Standards at the time of decision. My experience has been that Congress may think they have provided funds through the Department of Transportation, but it is tapped to oil the squeaking wheel all the way down through the system to Flight Standards, a relatively small segment of FAA in overall numbers but large in funding requirements for training and operations. If not willing to pay for doing the job right, they should come up with another way to accomplish this service. Don't put a price tag on aviation safety unless they are willing to pay the price.

#

I have read, reviewed, and initialed each page of this statement and I swear, to the best of my knowledge and belief, that the statements contained herein are true and correct.

/s/ Merle Hottenstein

Merle Hottenstein

Sworn to and subscribed before me

this _______ day of March, 1986.

Notary Public

My commission expires ___________.

AFFIDAVIT
OF
ALVA M. McCRORY

I, Alva M. McCrory, of Fort Worth, Texas, freely and voluntarily make the following statement to Glenn W. Fry, who has identified himself to me as a staff member of the United States Senate Permanent Subcommittee on Investigationsof the Committee on Governmental Affairs.

A.M.M.
3-11-86

My name is Alva M. McCrory and I reside in Fort Worth, Texas. I retired from the Federal Aviation Administration as an Air Carrier Maintenance ~~Inspector~~ Specialist in April 1985. My total aviation experience includes three years in the U. S. Army Air Corps (1942-46); thirteen years (1948-61) as an airframe and powerplant mechanic/inspector with United Airlines; and twenty-four years (1961-85) with the FAA as a maintenance inspector. The following are various observations regarding the efficiency and effectiveness of the Federal Aviation Administration and the airline industry.

Management always placed a high priority on certification. However, in past years, management did not seem to have a complete understanding or appreciation of the expertise needed by both FAA and industry personnel to properly certificate. It is my understanding that the FAA is now in the process of writing new procedures for its personnel to use during the certification process.

The air carrier certification process always places a very high workload on inspectors. This is generally due to the applicants' lack of knowledge and expertise with the air carrier certification process and the fact that the applicant has already financially committed himself to a large cash outlay prior to initiating the FAA certification process. If an applicant knows little about the certification process then additional work is created for an inspector. Also, if an applicant has made substantial financial investments and has set dates for the beginning of its operation it could result with inspectors giving too much emphasis, because of pressures from management, to meeting the applicant's deadline. A lesser emphasis is on the thoroughness of the inspection. This mind-set does not lend itself to a conscientious compliance posture.

A.M.M.
3-11-86

Tremendous demands are made on FAA personnel during the certification process. It requires the assignment of an inspector to each organizational area -- air carrier operations, maintenance and avionics. FAA certification manhours cannot be accurately estimated. This is due to the fact that FAA manhours required to complete a certification are directly related to the level of expertise of the applicants' personnel who are assigned certification duties. Certification demands on FAA resources are predicated on who [illegible] from the public wants to start an airline.

A.M.M.
3-11-86

therefore, accurate annual forecasts of FAA resources cannot be made accurately. Deregulation created an environment where there was rapid expansive air carrier growth. The FAA or Department of Transportation did not provide the necessary resources to deal with such growth.

Certification as well as surveillance varies with respect to consistency and quality on a nationwide basis. Expansion of large air carriers such as United, American and TWA has not created any great problems for FAA from the maintenance standpoint. Some smaller/commuter airlines such as FAR 135 (9 or less expanding to FAR 135, 10- or more) have created some problems.

I have no personal knowledge of any airline proposing to use large aircraft (12,500 lbs. max gross take-off weight) that had been certificated that should have not been allowed into operation. I have, on two or three occasions, seen FAR 135 (9 or less operators) certificated or authorized to upgrade to FAR 135 (ten or more operators) when they did not fully meet the additional FAR requirements. The discrepancies were items such as unacceptable continuous maintenance program; no surveillance and analysis program; failure to meet the FAR 135 (10 or more) required inspection item requirements; or maintenance manuals did not meet FAR 135 (10 or more) requirements. All of the foregoing certification deficiencies were identified and corrected by FAA in a timely manner and, in my opinion, did not result in jeopardizing safety in air transportation. However, since there is a lack of certification standardization nationwide there are no assurances that an airlines with the above deficiencies would not be certificated and permitted continued operation in the same region or other regions.

Many FAA personnel, including management personnel, do not like the geographical area concept. They treat responsibilities placed on them by the geographical area concept as additional duties. Priority is generally given to those certificate responsibilities within their own area of responsibility. Therefore, an airline that does extensive flying outside of its certificae holding region will not receive adequate surveillance. Consequently, flights will occur that may be unsafe because proper surveillance has not provided the deterrent to keep airlines in compliance with regulations. As an example, there were airlines operating through the Southwest region with, in my judgement, maintenance violations. However, the region where the airlines was certified many times did not agree with my interpretation. Therefore, if the finding region files a violation it has little ability to insure that corrections were made. If there was an agreement that the certificate holding region would file the violation there would also be difficulty in following up on corrective action by the air carrier.

Manpower and budget limitations are the only negative aspects affecting FAA's ability to physically inspect.

A.M.M.
3-11-86

I believe FAA upper management as well as airline management could benefit greatly from some version of the SWAP team concept. I do not believe that present FAA internal audit systems are sufficient to keep FAA management informed as to how well FAA is doing its job. An outside, objective evaluation of the FAA's effectiveness and an airline's compliance could be invaluable. The SWAP concept would greatly augment the FAA's normal inspection process.

Deregulation and resulting airline expansion has had a negative effect on the surveillance capabilities of FAA. FAA's surveillance responsibilities has increased many times over that of which existed prior to deregulation. This growth in surveillance responsibilities came about during the period of years when FAA was unable to increase its manpower due to job freezes, attrition, and reduction in forces mandated by the Administration. Recent authority for FAA to increase the number of inspectors will be helpful but only after a one or two year period which it takes to train new inspectors. Prior to deregulation, major airline maintenance bases were concentrated in 10 to 12 cities within the U. S. and FAA could concentrate their air carrier offices and inspectors in those cities. Since deregulation, airline main maintenance bases have been established in many more widespread areas of the country. Coupled with the loss of experienced, qualified inspectors, the increase in the number of operation bases has had a significant negative effect on FAA's surveillance capabilities.

Most formal FAA training is sufficient but is not given on a timely basis. Therefore, much initial training is conducted informally by journeymen inspectors until new hires are scheduled for formal training. The FAA, to my knowledge, has no formal training or guidelines for those who give on the job training. Consequently, there is the risk that varying procedures and methods of operating are taught, informally, nationwide. The FAA, thus, has inconsistent applications of policy nationwide which could result in varying degrees of compliance and safety nationally.

During the last several years the newly hired FAA maintenance inspectors do not have sufficient commercial air carrier experience. In order to be an effective FAA maintenance inspector it is necessary to have a familiarity and understanding of the operations of commercial air carriers and the requirements and procedures placed on them by the FAA. The FAA has recently taken the policy of hiring existing FAA personnel or personnel with civil service status. Such a policy precludes the hiring of inspectors with commercial air carrier experience. Also, the starting pay of a GS-9 or GS-11 is not competitive with what industry can pay MAINTENANCE SUPERVISORS. ~~mechanics.~~ The government requirements for an FAA maintenance inspector is not commensurate with the salary structure. If the government wants experienced, quality personnel it should pay them competitively with what industry will pay.

A.M. M.
3-11-86

The ability of maintenance inspectors to detect violations varies with each individual based on personality and dedication to the job. The number of violations detected can be contingent on whether an inspector is experienced, well trained, current with the state of the art machinery and technology or if he has the time to conduct surveillance. Motivation to prepare violation reports is not adequate. Most inspectors do not like to write investigative reports. It only adds to an already heavy workload and might result in court or hearing appearances which put more demands on available time. Consequently, there is a risk that inspectors will overlook minor violations in order to avoid demands on time.

The concept that FAA inspector presence among industry will enhance greater compliance is a sound theory. An FAA inspector presence is an invaluable asset with respect to air safety. Like the "cop on the beat", FAA presence creates a deterrent effect on airlines to keep in compliance with regulations. However, over the past few years there has not been sufficient FAA presence. This is due to the growth of industry and the decrease of the FAA workforce.

Standardization of enforcement actions is difficult to attain. Each violation case must be considered based on its own merits. There is, however, a need for uniform enforcement nationwide for similar violations.

In closing, I would like to state that I believe the Flight Standards Division of FAA is efficient and effective considering the available resources and the recent impact of deregulation. I also understand that the FAA Flight Standards Division is aware of most of its problems and is in the process of correcting them. Moreover, I believe the FAA will be successful if it is provided the resources necessary to establish the necessary programs and if the necessary personnel with the required expertise are hired.

I have read, reviewed and initialed each page of this statement and I swear, to the best of my knowledge and belief, that the statements contained herein are true and correct.

Alva M. McCrory
Alva M. McCrory

Sworn to and subscribed before me
this 11 day of March, 1986.

Notary Public

My commission expires 4-17-89

A.M.M.
3-11-86

AFFIDAVIT
OF
BRIAN J. VINCENT

I, Brian J. Vincent, of 17 Middle Drive, Plandome, Long Island, New York, make the following statement freely and voluntarily to Glenn W. Fry, who has identified himself to me as a staff member of the United States Senate Permanent Subcommittee on Investigations of the Committee on Governmental Affairs.

I am a graduate of the Merchant Marine Academy and sailed for one year as a third mate with United Fruit Steamship Corp. Upon graduation, I was also commissioned Ensign D-M USNR.

In September, 1941 I served on active duty with the U.S. Navy in the Aviation Cadet Program. I successfully completed the program in June 1942 and I was commissioned Ensign AV-N USNR. At that time, I was flying PBY type aircraft (twin engine amphibious Patrol/Bomber). My original orders were to to form and set into operation the Naval Air Transport Service (NATS). I remained on active duty throughout World War IIand served two years in the Pacific operations. Upon my discharge in 1946, I had accumulated over 3,000 pilot hours. At that time, I applied for a pilot's position with American Overseas Airlines (AOA) which was then part of American Airlines System. I was accepted by them as a pilot, successfully completed their training program and had my civil pilots license upgraded to an Airline Transport Pilot Certificate. The routes flown by AOA were from La Guardia Airport, N.Y., to Shannon and London and various countries throughout Europe. After three years of flying for the airlines, I joined the Civil Aeronautics Administration where I spent 33 years serving in various capacities within the Flights Standards Division. I retired after 35 years service from the position of Chief, Airports Division, Eastern Region, Federal Aviation Administration..

The airline profit picture was rearranged when deregulation left the major carriers struggling with new rules and increased competition, i.e., Braniff - Continental - Eastern- People's Express - New York Air. Previously, airlines were established, governed and regulated. Deregulation eliminated route and fare controls allowing new entries to become certificated with enough equipment, money and people to compete in only specified areas with specific routes. Standards for entering the air carrier industry were lowered.

The FAA is comprised of four major operating divisions, namely, 1) Air Traffic Service, 2) Airway Facility Service, 3) Airports Service, and 4) Flight Standards Service. The FAA developed a comprehensive program for updating and modernizing the nation's air traffic control and air navigation systems. This program is well underway and has both short-term and long-term goals and has received high agency emphasis. It naturally follows with this emphasis and high visibility type program that the agency resources, both manpower and money, are prioritized to such programs. The effect on Flight Standards Service and, to a lesser degree, the Airports Service over the past several years has been a dramatic reduction in their assigned personnel. This reduction in the work force occurred during a period of time when numerous new applicants seeking entry into air service required a larger degree of attention which, in turn, required an increase in FAA manpower. New airline management and personnel lacked adequate experience and knowledge to properly prepare for certification. Therefore, an inordinately large demand was placed on field personnel to guide and, in fact, do the applicant's work. Such demands of FAA personnel caused other Flight Standards responsibilities to suffer, such as surveillance and enforcement. Additionally, with budget problems the FAA has imposed hiring freezes (not replacing attrition) which causes increases to the workload of the board inspector complement, delays in handling required work and a reduction to surveillance activities. Before deregulation there were 31 airlines operating as scheduled carriers. Today there are over 60 scheduled passenger carriers among the 92 certified air carriers. Additionally, the number of air cargo firms has increased from three to eleven and the number of charter companies has increased from eight to 20. At the same time, the number of aircraft operated by air carriers has increased by about 25%, i.e., 2,200 to 2,900.

These carriers are the responsibility of the various Flight Standards District Offices (FSDO). The FSDO assigns responsibility for each certificated carrier to a Principal Operations, Airworthiness, and Avionics Inspector. These inspectors have responsibility for more than one air carrier and this is determined by the number of carriers located within the FSDO's jurisdiction. The principal inspectors are the most knowledgeable and familiar persons with respect to his assigned air carriers. Unfortunately, due to FAA's present managerial concept, a Regional Director or Deputy could and has overruled or reversed Flight Standards and Principal Inspectors on occasions. The fallacy here is that, today, most Regional Directors do not have the technical competence to judge a principal inspector's findings.

Present Agency philosophy in the Eastern Region stresses managerial traits. Technical competence has taken on a lesser importance. The region is high on managerial training and, as a consequence, technical training due to budget limitations has suffered. Moreover, when replacement inspectors are hired, a few at a time, the training center schedules indoctrination classes when there are a sufficient number of new inspectors to warrant a class. While this is understandable, it places a burden on the offices to which the new inspectors are assigned. The necessity for on-the-job-training (OJT), therefore, requires a journeyman inspector to take time from his assigned functions to give OJT to the trainee. The OJT concept lacks standardization which is essential to uniform application of the FAR's.

Another weakness is in the area of program emphasis. What may be highlighted in one region may be downgraded in another region. Because there is a lack of uniformity by the FAA in applying regulations and in the interpretations of regulations, it is advantageous for companies to shop for regions which fit their needs. Consequently, the system allows a carrier to say, for example, "I don't like this region; I can get a better deal in another region; therefore, I'm going to move my certificate elsewhere." Air carrier applicants are aware of this, so it is conducive to their "shopping" for the answer that suits their purpose.

The Eastern Region Director recently held an all managers conference. This was followed by the functional divisions holding their own meetings. The Flight Standards Division agenda topics dealt with: status of merit pay for managers - needed performance standards - budget status review - personnel search procedures - emphasis on minority and women applicants. All are worthy items except, with deteriorating aviation safety, I would think the agenda would reflect a safety concern by including technical subjects and program emphasis items. It seemed more sensible to stress increased surveillance, increased training and recurrent training, a greater enforcement posture, and a focus on the operations of the many new air carrier entrants. The lack of operational and technical topics reflects the Regional Director's philosophy. His concern is the "public image" of his region. To this end, he has hired consultants in many and varied areas to write, in glowing terms, about regional accomplishments and plans; this is a facade. This type of public relations is misleading. Although the Regional Director wants to portray his region as being the number one region, the truth, in most instances, is that the safety standards and compliance posture of the region's respective air carriers are minimally satisfactory. The money spent to promote public relations could and should go toward improving and expanding operations to insure public safety and better service. The money devoted to these efforts, which is significant, could and should go toward safety and better service for the public.

At one time the regional technical programs reported and were responsible to their Washington headquarters counterparts. This encouraged regional standardization. Today the Regional Directors have responsibility for the technical programs and this leads to regional competition and one-upmanship. Consequently, technical programs such as training, surveillance and enforcement suffer.

Enforcement can be a time-consuming function and, because of these time constraints, an inspector may "informally" adjudicate the matter rather than formally process a violation. Also, the potential penalty for a violation is $1,000. A carrier operating a large aircraft might decide to include this amount in the cost of doing business and operate with deliberate violations. The dollar amount for violations should be increased. In order for inspectors to be motivated and conscientious, feedback of case dispositions to the reporting inspector should be standard procedure.

A weakness in today's method of doing business with the large air carriers is the Regional concept. The corporate headquarters of a carrier may be in one region, operational control in another region, and its maintenance headquarters in still another region. The FAA provides manpower per region dependent on the number of air carrier certificates which are held by that region. For instance, TWA is certificated in Kansas City, Missouri, but the bulk of its operations is through New York. Therefore, the FAA allocated its personnel to Kansas City whereas FAA personnel in New York will provide secondary surveillance of TWA simply because their priority is directed to New York certificated air carriers. Contract maintenance and services can readily compound this problem. I personally have been an advocate of straight line control by the principal inspectors of air carriers (across regional boundaries).

I believe Flight Standards Inspectors are highly competent and capable. They are motivated and dedicated but at the same time frustrated due to time restraints. They are in a very technical program area and need to keep abreast of industry by continual updating. Any manager in Flight Standards must be a working manager, i.e., have technical expertise in one of the three program specialities. It is counterproductive for the FAA to have a regional air carrier operation program under the supervision of managers not trained in that area. This is necessary because the nature of the FAA's operations is such that managers have to have a thorough involvement.

#

I have read, reviewed and initialed each page of the foregoing statement and I swear, to the best of my knowledge and belief, that the statements contained herein are true and correct.

/s/
Brian J. Vincent

Sworn to and subscribed before me

this ______ day of March, 1986.

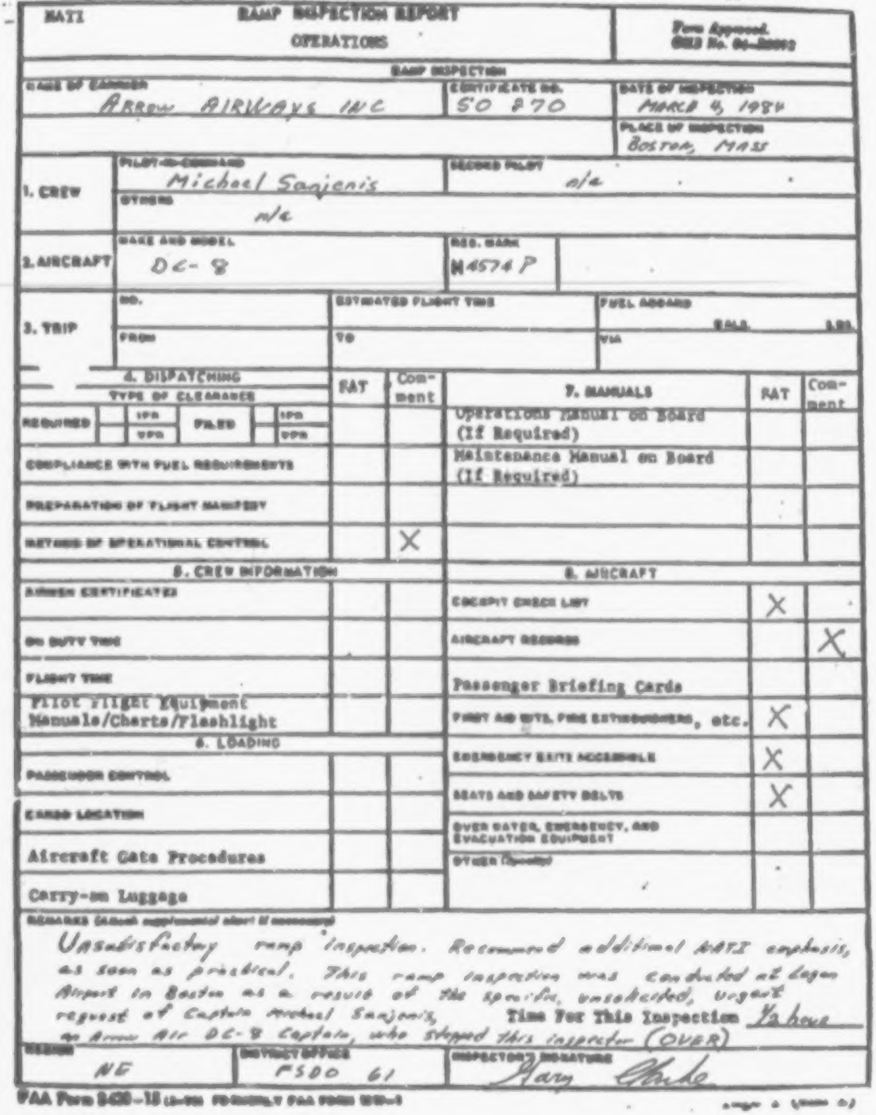
Notary Public

My commission expires __________

EXHIBIT NO. 2

8000.
Appendix 3.

FIGURE 3-2



NATI

RAMP INSPECTION REPORT
OPERATIONS

Form Approved.
OMB No. 04-R0092

RAMP INSPECTION

NAME OF CARRIER Arrow AIRWAYS INC	CERTIFICATE NO. SO 870	DATE OF INSPECTION MARCH 4, 1984
		PLACE OF INSPECTION Boston, MASS

1. CREW	PILOT-IN-COMMAND Michael Sanjenis	SECOND PILOT n/a
	OTHERS n/a	
2. AIRCRAFT	MAKE AND MODEL DC-8	REG. MARK N4574P

3. TRIP	NO.	ESTIMATED FLIGHT TIME	FUEL ABOARD GALS. LBS.
	FROM	TO	VIA

4. DISPATCHING TYPE OF CLEARANCE	SAT	Comment
REQUIRED ☐ IFR ☐ VFR FILED ☐ IFR ☐ VFR		
COMPLIANCE WITH FUEL REQUIREMENTS		
PREPARATION OF FLIGHT MANIFEST		
METHODS OF OPERATIONAL CONTROL		X
5. CREW INFORMATION		
AIRMEN CERTIFICATES		
ON DUTY TIME		
FLIGHT TIME		
Pilot Flight Equipment Manuals/Charts/Flashlight		
6. LOADING		
PASSENGER CONTROL		
CARGO LOCATION		
Aircraft Gate Procedures		
Carry-on Luggage		

7. MANUALS	SAT	Comment
Operations Manual on Board (If Required)		
Maintenance Manual on Board (If Required)		
8. AIRCRAFT		
COCKPIT CHECK LIST	X	
AIRCRAFT RECORDS		X
Passenger Briefing Cards		
FIRST AID KITS, FIRE EXTINGUISHERS, etc.	X	
EMERGENCY EXITS ACCESSIBLE	X	
SEATS AND SAFETY BELTS	X	
OVER WATER, EMERGENCY, AND EVACUATION EQUIPMENT		
OTHER (Specify)		

REMARKS (Attach supplemental sheet if necessary)

Unsatisfactory ramp inspection. Recommend additional NATI emphasis, as soon as practical. This ramp inspection was conducted at Logan Airport in Boston as a result of the specific, unsolicited, urgent request of Captain Michael Sanjenis, an Arrow Air DC-8 Captain, who stopped this inspector (OVER)

Time For This Inspection ½ hour

REGION NE	DISTRICT OFFICE FSDO 61	INSPECTOR'S SIGNATURE Gary Clarke

FAA Form 8430-13 (2-80) FORMERLY FAA FORM [illegible] on the ramp at Logan and not only requested that I look at "his" DC-8 and fly on it with him, but pleaded, demanded, begged and requested that the FAA..."please, please, home in on Arrow to stop current company maintenance practices before an accident occurs." He stated that it would be better to..."shut down the company rather than to keep flying this aircraft."

Captain Sanjenis' complaints about Arrow Air were focused primarily on 3 areas: ① chaotic and hap-hazard crew scheduling and operational control, ② Excessive flight and crew duty hours as a result of an intermix of International, domestic, and FAR Part 91 flights, and ③ most serious, a continuing company policy of not fixing maintenance problems on aircraft but rather deferring maintenance items, (DMI) for prolonged periods, placarding numerous MEL items without corrective action, and "pencil whipping" maintenance discrepancies throughout the system. He stated that..."On most Arrow Air Aircraft the first level of built in safety redundancy in aircraft systems was for all practical purposes virtually eliminated due to the numerous open write ups and the fact that some items are always inop and very few things are fixed."

From the numerous open writeups, and systems placarded as inop, and the fact that the aircraft was in a lengthy maintenance delay at the time of this ramp inspection, it is my observation that many of Captain Sanjenis' complaints are legitimate.

The following maintenance discrepancies were noted as open in the aircraft maintenance log books:

1. Altitude alert light inop. MEL 00463
2. Captains DME inop MEL 00788

([illegible] page)

NATI

INSPECTION AND SURVEILLANCE RECORD

1. WORK ACTIVITY: NATI Ramp Inspection

2. UNITS:

3. HOURS: ½

4. NAME AND ADDRESS OF CARRIER, OPERATOR, AIRPORT, AGENCY, OR AIRMAN: Arrow Air

5. CERTIFICATE NO. OR AIRCRAFT REGISTRATION MARK (No.): SO 170

6. RESULTS: ☐ SATISFACTORY ☒ UNSATISFACTORY (Explain in item 8)

7. FURTHER ACTION REQ.: ☐ NO ☑ YES (Explain action in item 8)

8. FINDINGS/RECOMMENDATIONS

(Continued From 8430-15)

3. Right Wing Flood light inop. MEL 00468
4. Center Wing Aux Fuel Fill inop MEL 00458
5. Fuel Totalizer inop MEL 00791
6. Refill Switch inop - outer wing tank MEL 00457
7. No. 3 Turbo Compressor inop, 2/1/84 MEL 00998
8. Cabin Door Light inop 3/1/84
9. Generator over load light inop 3/1/84 MEL 00998
10. Aux. hyd. light inop MEL 00468
11. Yaw damper computer inop, ANI 2/24/84
12. No. 4 Alt. Fill Transfer switch does not work.
13. No. 1 Engine intake missing rivet, 7 o'clock position 2/1/84
14. Tail skid needs strike indicator
15. Both fuel totalizers read high at all times
16. Pitot heat inop light remains on at all times 2/16/84
17. Flight annunciator does not display properly 2/16/84
18. Center Wing Aux fuel tank bay has to be turned to zero before fill valve will open... Wired backwards? 2/24/84

(OVER)

(If more space is required, use reverse side)

☑ OPERATIONS ☐ MAINTENANCE ☐ AVIONICS	DATE 3/4/84	REGION AND DISTRICT OFFICE AE FSDO 61	INSPECTOR'S SIGNATURE

FAA Form 3112 [illegible]

U.S. GOVERNMENT PRINTING OFFICE: [illegible]

The aircraft was in a maintenance delay status due
to possibly a longitudinal or horizontal control system problem.
I requested that the station manager inform me of what the
current maintenance problem was. When he returned, 15-20 minutes
later, he informed Captain Sanjines that he and his crew were
released and that the aircraft would be in an extended, 7-8 day
delay awaiting parts. He did not state what parts. This
concluded the ramp inspection

Captain Sanjines also informed me that another Arrow Air
DC-8, aircraft 919, had numerous maintenance problems including
a long term gyro problem which resulted in flags and
other unreliable readings on flight instruments during turns.

The other allegations made by Captain Sanjines concerning
crew operational control and excessive duty time are noted
here for the record but adequate documentation was not
available at the time.

Captain Sanjines has made a sincere and frank
statement concerning the operations and maintenance policies of
his company, Arrow Air. His cry for help is hereby noted.

AATI follow up action is recommended.

notified PMI 3/5/84. John Boston

EXHIBIT NO. 3

Form Approved OMB No. 04-R0102

DEPARTMENT OF NSPORTATION—FEDERAL AVIATION ADMINIS ATION

AIRMAN CERTIFICATE AND/OR RATING APPLICATION

IRLINE TRANSPORT PILOT ☒ ADDITIONAL AIRCRAFT RATING ☐ REISSUANCE OF CERTIFICATE

TYPE OF AIRCRAFT TO BE USED: DC-8

TIME IN THIS AIRCRAFT: 1000 HRS.

1. APPLICANT IDENTIFICATION

A. NAME (First, Middle, Last): MICHAEL LOUIS SANJENIS

C. DATE OF BIRTH: 2/15/40

D. HEIGHT: 73 IN

E. WEIGHT: 180

F. HAIR: BLOND

G. EYES: BLUE

H. SEX: M

I. NATIONALITY: U.S.A

J. PLACE OF BIRTH: PHILADELPHIA, PA.

K. PERMANENT MAILING ADDRESS NUMBER AND STREET, P.O. BOX, ETC.: 1107 FIFTH AVENUE

CITY, STATE, ZIP CODE: NEW YORK, NEW YORK 10028

COUNTY: NEW YORK

2. CERTIFICATE OR RATING APPLIED FOR ON BASIS OF: ☒ A. HOLDER OF A COMMERCIAL PILOT CERTIFICATE

☐ B. MILITARY EXPERIENCE OBTAINED IN: (1) SERVICE (2) DATE RATED (3) RANK AND SERIAL NUMBER

☐ C. HOLDER OF FOREIGN LICENSE ISSUED BY: (1) COUNTRY (2) GRADE OF LICENSE (3) NUMBER (4) RATINGS

3. APPLICANT'S CERTIFICATION: I certify that I meet all pertinent requirements of the regulations for the certificate or rating applied for.

DATE: 7/20/83

APPLICANT'S SIGNATURE:

INSTRUCTOR'S RECOMMENDATION

der the above applicant ready to take the test for which he is applying.

DATE: 7/20/83

INSTRUCTOR'S SIGNATURE:

INSTRUCTOR'S CERTIFICATE NO. & EXPIRATION DATE: ATP

GRADE OF CERTIFICATE & NO: ATP 465070

EVALUATOR'S RECORD

	INSPECTOR	EXAMINER	SIGNATURE	DATE
ORAL	☐	☐		7-31-83
SIMULATOR CHECK	☑	☐		7/25/83
AIRCRAFT FLIGHT CHECK	☒	☐	Niles Bradshaw	8-2-83

INSPECTOR'S REPORT

☒ Temporary Airman Certificate Issued ☐ Notice of Disapproval of Application Issued ☐ Examiner's Action Accepted

DATE: 8-2-83

INSPECTOR'S SIGNATURE: Niles Bradshaw

FAA OFFICE: NM ACDO-31

RATING (1) RATING (2) RATING (3)

RATING (4) RATING (5) RATING (6) RATING (7) RATING (8)

RATING (9) RATING (10) RATING (11) RATING (12) RATING (13)

LIMITATIONS

FAA FORM 8410-2 (2-78) Supersedes previous edition

FLIGHT MANEUVERS

GRADING LEGEND *(All applicable items must be graded S, U or W)*
S-SATISFACTORY U-UNSATISFACTORY W-WAIVED

	INSPECTOR/EXAMINER	
PREFLIGHT	AIRCRAFT	SIMULATOR
1. EQUIPMENT EXAMINATION *(oral)*		
2. *PREFLIGHT INSPECTION	S	S
3. TAXIING	S	
4. POWERPLANT CHECKS	S	S
TAKEOFFS		
5. NORMAL	S	
6. INSTRUMENT		S
7. CROSSWIND	S	
8. WITH SIMULATED POWERPLANT FAILURE		S
9. *REJECTED TAKEOFF		S
INSTRUMENT PROCEDURES		
10. *AREA DEPARTURE		S
11. *HOLDING		S
12. *AREA ARRIVAL		S
13. ILS APPROACHES	S	S
14. OTHER INSTRUMENT APPROACHES LOC DME		S
15. CIRCLING APPROACHES		N.A
16. MISSED APPROACHES	S	S
INFLIGHT MANEUVERS		
17. *STEEP TURNS		S
18. *APPROACHES TO STALLS		S
19. *SPECIFIC FLIGHT CHARACTERISTICS		N.A
20. POWERPLANT FAILURE	S	S
LANDINGS		
21. NORMAL	S	
22. FROM AN ILS		S
23. CROSSWIND	S	
24. WITH SIMULATED POWERPLANT(S) FAILURE	S	S
25. REJECTED LANDING		S
26. NO FLAP APPROACH		S
27. FROM CIRCLING APPROACH		N.A
28. ACCURACY APPROACHES AND SPOT LANDINGS *(Single powerplant rating only)*		
29. HOVERING MANEUVERS		
30. RAPID DECELERATIONS *(Quick stops)*		
31. AUTOROTATIONS *(Single engine helo, only)*		
32. NORMAL AND ABNORMAL PROCEDURES	S	S
33. EMERGENCY PROCEDURES	S	S
34. JUDGEMENT	S	S

Items that may be waived are indicated by an asterisk (*). For further information see appendix A, FAR 61.

REMARKS

Qualified CAT I minimums

FLIGHT MANEUVERS

GRADING LEGEND *(All applicable items must be graded S, U or W)*
S-SATISFACTORY U-UNSATISFACTORY W-WAIVED

	INSPECTOR/EXAMINER	
PREFLIGHT	AIRCRAFT	SIMULATOR
1. EQUIPMENT EXAMINATION *(oral)*	S	S
2. *PREFLIGHT INSPECTION	S	S
3. TAXIING	S	S
4. POWERPLANT CHECKS	S	S
TAKEOFFS		
5. NORMAL	S	S
6. INSTRUMENT	S	S
7. CROSSWIND	S	S
8. WITH SIMULATED POWERPLANT FAILURE		S
9. *REJECTED TAKEOFF		S
INSTRUMENT PROCEDURES		
10. *AREA DEPARTURE	S	S
11. *HOLDING	S	S
12. *AREA ARRIVAL	S	S
13. ILS APPROACHES	S	S
14. OTHER INSTRUMENT APPROACHES VOR NDB		S
15. CIRCLING APPROACHES		—
16. MISSED APPROACHES	S	S
INFLIGHT MANEUVERS		
17. *STEEP TURNS		S
18. *APPROACHES TO STALLS		S
19. *SPECIFIC FLIGHT CHARACTERISTICS		S
20. POWERPLANT FAILURE	S	S
LANDINGS		
21. NORMAL	S	S
22. FROM AN ILS	S	S
23. CROSSWIND	S	S
24. WITH SIMULATED POWERPLANT(S) FAILURE	S	S
25. REJECTED LANDING		S
26. NO FLAP APPROACH H-ID FAIL		S
27. FROM CIRCLING APPROACH		—
28. ACCURACY APPROACHES AND SPOT LANDINGS *(Single powerplant rating only)*		
29. HOVERING MANEUVERS		
30. RAPID DECELERATIONS *(Quick stops)*		
31. AUTOROTATIONS *(Single engine helo, only)*		
32. NORMAL AND ABNORMAL PROCEDURES	S	S
33. EMERGENCY PROCEDURES	S	S
34. JUDGEMENT	S	S

Items that may be waived are indicated by an asterisk (*). For further information see appendix A, FAR 61.

REMARKS

ARROW AIRWAYS, INC.

FORM OT-
REVISION
6/1/82

PILOT & F/E SIMULATOR/AIRCRAFT PROFICIENCY CHECK

CAPT
~~F/O~~
~~F/E~~ NAME M [illegible] BASE [illegible]

TYPE OF CHECK: INITIAL ____ AIRCRAFT TYPE ____ TIME ____ DATE ____
PROF ✓ SIMULATOR TYPE [illegible] TIME [illegible] DATE [illegible]
RECURR ____ BRIEF/DE-BRIEF ____ AIRCRAFT NO. ____

LEGEND:
A-AIRCRAFT S-SIMULATOR F/E-FLIGHT ENGINEER
VS-VISUAL SIMULATOR W-MAY BE WAIVED

GRADING LEGEND:
S-SATISFACTORY I-INCOMPLETE
U-UNSATISFACTORY W-WAIVED

NOTE: APPROPRIATE ITEMS FOR PHASE I & II WILL BE GRADED IN S/VS.	A	S VS	F/E	NO ITEMS TO BE WAIVED ON PHASE I	A	S VS	F/E
1. PREFLIGHT (COCKPIT ONLY)		S		10. STEEP TURNS (CAPT ONLY)		S	
2. TAXIING		S		11. APPR TO STALLS (15° BANK)		S	
3. TAKE OFF: NORMAL, X-WIND		S		12. SPECIFIC FLIGHT CHARACTERISTICS		—	
(A) ENG. OUT-INST.		S		13. POWER PLANT FAILURE		S	
(B) REJECTED *W		S		14. LANDINGS: NORMAL, ~~X-WIND~~		S	
4. AREA DEPARTURE I REQUIRED		S		(A) FROM ILS		S	
5. HOLDING		S		(B) REJECTED		S	
6. ILS APPR NORMAL (A/P) (MANUAL)		S		(C) 50% POWER (2/3 ENG A/C CAPT)		—	
(A) ENG. OUT MANUAL		S		(D) 50% POWER (4 ENG A/C CAPT)		S	
7. NON PREC. APPR-(2)(1) A/C OR VS VOR [illegible]		S		(E) ENGINE OUT		S	
8. PRECISION APPROACH, RADAR (PAR)		S		(F) FROM CIRCLE		—	
9. MISSED APPROACH FROM ILS		S		15. COMMAND JUDGMENT		S	
(A) OTHER (CAPT ONLY)		S		16. ORAL EXAMINATION		S	

*NOT WAIVABLE ON INITIAL CHECK.

PROCEDURES
NORMAL/ABNORMAL (ALL ITEMS REQ. FOR F/E) EMERGENCY

A. START PROCEDURES	S	H. FUEL DUMP		A. ENGINE: FIRE/FAILURE/RESTART	S
B. COMPUTATION/PERFORMANCE		I. ICE & RAIN SYSTEM		B. ELECTRIC SMOKE & FIRE	
C. AUTO FLT/FLT DIR.	S	J. RADAR		C. ELECTRIC MALFUNCTIONS	
D. ELECTRIC SYSTEM		K. OXYGEN SYSTEM		D. RAPID DEPRESS/EMERGENCY DESCENT	
E. PRESSURIZATION SYSTEM		L. LNDG. GEAR & BRAKES		E. CABIN & COCKPIT FIRE	
F. AIRCONDITIONING SYSTEM		M. AUX. POWER UNIT		F. ANTI-HIJACK PROCEDURE	
G. HYDRAULIC SYSTEM		N. USE OF CHECK LIST	S	G. OTHER: WIND SHEAR [illegible]	S

~~AIRCRAFT~~ LANDINGS [illegible] SIM
A. AIRCRAFT NO. [illegible] DATE [illegible] TIME ____
B. NO. OF LANDINGS 11 LOCATION DEN/[illegible]

ENROUTE LANDINGS
A. FLIGHT NO. ____ AIRCRAFT NO. ____
B. TIME DATE LOCATION / /

INS ☐		NAVIGATION		ONS ☐	
A. PREFLIGHT		D. FLIGHT PLAN CHANGE		G. DIVERGENCE	
B. PRESENT POSITION		E. MALFUNCTIONS CODES		H. POST FLIGHT PROCEDURES	
C. WAYPOINT LOADING		F. ABNORMAL PROCEDURES		I. SHUTDOWN	

CHECK AIRMAN SIM
NAME O.F. Sough
SIGN

CHECK AIRMAN A/C ENROUTE
NAME ____
SIGN ____

FAA OBS: SIM ____
A/C ____

COMMENTS:
DC8 F/C SIMULATOR PROFICIENCY CHECK COMPLETE - RECENT EXPERIENCE REQUIREMENTS (LANDINGS) COMPLETE - REQUIRED LANDINGS IN AIRCRAFT TO BE COMPLETED DURING [illegible] OPERATION

ARROW AIRWAYS, INC.

FORM OT-
REVISIO
6/1/82

PILOT & F/E SIMULATOR/AIRCRAFT PROFICIENCY CHECK

[✓ CAPT]
F/O
F/E NAME M. SANTENIS BASE JFK

TYPE OF CHECK: INITIAL ___ AIRCRAFT TYPE ___ TIME ___ DATE ___
PROF ✓ SIMULATOR TYPE B707 TIME 2400 DATE 5/13/83
RECURR ___ BRIEF/DE-BRIEF ___ AIRCRAFT NO. ___

LEGEND:
A-AIRCRAFT S-SIMULATOR F/E-FLIGHT ENGINEER
VS-VISUAL SIMULATOR W-MAY BE WAIVED

GRADING LEGEND:
S-SATISFACTORY I-INCOMPLETE
U-UNSATISFACTORY W-WAIVED

NOTE: APPROPRIATE ITEMS FOR PHASE I & II WILL BE GRADED IN S/VS.	A	S VS	F/E	NO ITEMS TO BE WAIVED ON PHASE I	A	S VS	F/E
1. PREFLIGHT W		S		10. STEEP TURNS (CAPT ONLY)		S	
2. TAXIING				11. APPR TO STALLS(15°BANK) DP		S	
3. TAKE OFF: NORMAL,X-WIND (2)		S		12. SPECIFIC FLIGHT CHARACTERISTICS			
(A) ENG. OUT-INST.		S		13. POWER PLANT FAILURE		S	
(B) REJECTED *W		S		14. LANDINGS: NORMAL,X-WIND			
4. AREA DEPARTURE I REQUIRED		S		(A) FROM ILS			
5. HOLDING		S		(B) REJECTED		S	
6. ILS APPR NORMAL (A/P) (MANUAL)		S		(C) 50% POWER (2/3 ENG A/C CAPT)			
(A) ENG. OUT MANUAL		S		(D) 50% POWER (4 ENG A/C CAPT)		S	
7. NON PREC.APPR-(2) (I)A/C OR [✓ VS]		S		(E) ENGINE OUT		S	
8. PRECISION APPROACH, RADAR (PAR)		S		(F) FROM CIRCLE			
9. MISSED APPROACH FROM ILS (3)		S		15. COMMAND JUDGEMENT		S	
RAW DATA (A) OTHER (CAPT ONLY)		S		16. ORAL EXAMINATION		S	

*NOT WAIVABLE ON INITIAL CHECK.

PROCEDURES

NORMAL/ABNORMAL (ALL ITEMS REQ. FOR F/E) EMERGENCY

A. START PROCEDURES		H. FUEL DUMP		A. ENGINE: FIRE/FAILURE/RESTART	
B. COMPUTATION/PERFORMANCE		I. ICE & RAIN SYSTEM		B. ELECTRIC SMOKE & FIRE	
C. AUTO FLT/FLT DIR.		J. RADAR		C. ELECTRIC MALFUNCTIONS	
D. ELECTRIC SYSTEM		K. OXYGEN SYSTEM		D. RAPID DEPRESS/EMERGENCY DESCENT	
E. PRESSURIZATION SYSTEM		L. LNDG. GEAR & BRAKES		E. CABIN & COCKPIT FIRE	
F. AIRCONDITIONING SYSTEM		M. AUX. POWER UNIT		F. ANTI-HIJACK PROCEDURE	
G. HYDRAULIC SYSTEM		N. USE OF CHECK LIST		G. OTHER:	

AIRCRAFT LANDINGS
A. AIRCRAFT NO. ___ DATE ___ TIME ___
B. NO. OF LANDINGS ___ LOCATION 1

ENROUTE LANDINGS
A. FLIGHT NO. [illegible] AIRCRAFT NO. [illegible]
B. TIME 4.36 DATE [illegible] LOCATION [illegible]

INS ☐		NAVIGATION		ONS ☐	
A. PREFLIGHT		D. FLIGHT PLAN CHANGE		G. DIVERGENCE	
B. PRESENT POSITION		E. MALFUNCTIONS CODES		H. POST FLIGHT PROCEDURES	
C. WAYPOINT LOADING		F. ABNORMAL PROCEDURES		I. SHUTDOWN	

CHECK AIRMAN SIM
NAME Albert N Bach
SIGN Albert N Bach

CHECK AIRMAN A/C ENROUTE
NAME [illegible]
SIGN ___

FAA OBS: SIM ___
A/C ___

COMMENTS: GOOD CHECK RIDE. PROFESSIONAL ORGANIZED & RUN COCKPIT.

ARROW AIRWAYS, INC.

FORM OT-7
REVISION 8
6/1/82

PIC LINE CHECK

CAPTAIN [illegible] INITIAL CHECK ☐ RECURRENT CHECK ☐

F/O [illegible] F/E [illegible] DATE [illegible] A/C TYPE [illegible] A/C # [illegible]

FLIGHT NUMBER [illegible] TOTAL BLOCK TIME ______ DAY ______ NIGHT [illegible]

TOTAL LANDINGS ______ ROUTE [illegible] CHECK CAPT. NAME [illegible]

1. *PRE-FLIGHT*
   - Weather Analysis ☐
   - Flight & Fuel Analysis ☐
   - Takeoff Data – Wt. & Bal. ☐
   - Crew Flight Briefing ☐
   - Cockpit Setup ☐
   - Taxi ☐
2. *TAKE-OFF*
   - V_1, V_r, V_2 Compliance ☐
   - Rotation Techniques ☐
3. *CLIMB*
   - Noise Abatement Compliance ☐
   - Flap Retraction Schedule ☐
   - Speed Control ☐
4. *CRUISE*
   - Altitude Control ☐
   - Enroute Wind Analysis ☐
   - Fuel & Weather Checks ☐
5. *DESCENT*
   - Destination Planning ☐
   - Speed Control ☐
   - Landing Data ☐
6. *APPROACH*
   - Auto-Pilot Operation ☐
   - Speed Control ☐
   - Altitude Control ☐
   - Holding Compliance ☐
   - Use of Radio Equipment ☐
   - Approach Technique
   - ILS ☑ ; GCA ☐ ; VOR ☐ ; ADF ☐ ; IFR ☑ ; VFR ☐
7. *LANDING*
   - Boundary Speed Control ☐
   - Touchdown ☐
   - Reversing Technique ☐
   - Braking Technique ☐
8. *GENERAL (CAPTAIN)*
   - Appearance ☐
   - Flight Equipment ☐
   - Knowledge of Route ☐
   - P.A. Announcements ☐
   - Control Coordination, Smoothness ☐
   - Command Responsibility (Coordination and best use of crew) ☐
   - Judgement ☐
   - Adherence to standard procedures ☐

COMMENTS:

THIS CERTIFIES THAT THE REQUIREMENTS OF A [illegible] HAVE BEEN [illegible] COMPLETED. (Signed) [illegible]
(S=Satisfactorily, U= Unsat., I= Incomplete) (FAA/CHECK PILOT)

FORM OT-7
REVISION 8
6/1/82

ARROW AIRWAYS, INC.

PIC LINE CHECK

CAPTAIN SanJenis, M. INITIAL CHECK ☐ RECURRENT CHECK ☒

F/O SENNINGS F/E ALVAREZ DATE 5-8-83 A/C TYPE 707 A/C # N7075H

FLIGHT NUMBER 8715/8710 TOTAL BLOCK TIME 4:56 DAY 4:56 NIGHT

TOTAL LANDINGS 2 ROUTE JFK-MCO-BDL CHECK CAPT. NAME WILSON

1. *PRE-FLIGHT*

Weather Analysis	S
Flight & Fuel Analysis	S
Takeoff Data – Wt. & Bal.	S
Crew Flight Briefing	S
Cockpit Setup	S
Taxi	S

2. *TAKE-OFF*

V_1, V_r, V_2 Compliance	S
Rotation Techniques	S

3. *CLIMB*

Noise Abatement Compliance	S
Flap Retraction Schedule	S
Speed Control	S

4. *CRUISE*

Altitude Control	S
Enroute Wind Analysis	S
Fuel & Weather Checks	S

5. *DESCENT*

Destination Planning	S
Speed Control	S
Landing Data	S

6. *APPROACH*

Auto-Pilot Operation	S
Speed Control	S
Altitude Control	S
Holding Compliance	NR
Use of Radio Equipment	S

Approach Technique
ILS ☑ ; GCA ☐ ; VOR ☐ ; ADF ☐ ; IFR ☐ ; VFR

7. *LANDING*

Boundary Speed Control	S
Touchdown	S
Reversing Technique	S
Braking Technique	S

8. *GENERAL (CAPTAIN)*

Appearance	S
Flight Equipment	S
Knowledge of Route	S
P.A. Announcements	S
Control Coordination, Smoothness	
Command Responsibility (Coordination and best use of crew)	S
Judgement	S
Adherence to standard procedures	S

COMMENTS: VERY GOOD CHECK; GOOD STANDARDIZATION AND KNOWLEDGE OF PROCEDURES.

2 LANDINGS OBSERVED PER FAR 121.441

THIS CERTIFIES THAT THE REQUIREMENTS OF A LINE CHECK HAVE BEEN SATISFACTORILY COMPLETED. (Signed)
(S=Satisfactorily, U= Unsat., I= Incomplete) (FAA/CHECK PILOT)

OPERATIONS
TRAINING
RECORD

ARROW AIRWAYS, INC.

FORM OT-4
REVISION 8
6/1/82, Page

CAPTAIN	☒	FLIGHT OFFICER NAME	EMPLOYEE NO.	BASE
FIRST OFFICER	☐	Sanjenis, Mike	74338	JFK
FLIGHT ENGINEER	☐			

COURSE OF TRAINING

INITIAL ☐ TRANSITION ☒ 707 to DC8 UPGRADE ☐ REQUALIFICATION ☐ RECURRENT ☐ OTHER ________

BASIC INDOCTRINATION

DAY 1 DATE	DAY 2 DATE	DAY 3 DATE	DAY 4 DATE	DAY 5 DATE

DC-8
TYPE A/C

GROUND SCHOOL/CPM/CPT

DAY 1 DATE 5/17/83	DAY 2 DATE 5/18/83	DAY 3 DATE 5/19/83	DAY 4 DATE 5/20/83	DAY 5 DATE 5/21/83	DAY 6 DATE 5/23/83
DAY 7 DATE 5/24/83	DAY 8 DATE 5/25/83	DAY 9 DATE 5/26/83	DAY 10 DATE 7/1/[illegible]	DAY 11 DATE CPM 7/15/83	DAY 12 DATE CPM 7/[illegible]/83
DAY 13 DATE	DAY 14 DATE	DAY 15 DATE	DAY 16 DATE	DAY 17 DATE	DAY 18 DATE

Approved Ground School Training Course Completed. Recommended for Oral Examination.	INSTRUCTOR: (NAME) RUDY KIFFER (SIGN) Rudy Kiffer	DATE 7/1/83
Oral Examination Satisfactory	CHECK AIRMAN OR FAA INSPECTOR'S SIGNATURE / FAA R. BRITNER DEN ACDO	DATE 21 July 83

SIMULATOR (Details on pages 2,3 and 4)

PERIOD 1: DATE 7-13-83	PERIOD 2: DATE 7-14-83	PERIOD 3: DATE 16/17 July 83.	PERIOD 4: DATE 17/18 July 83	PERIOD 5: DATE 19/22/25 July
TIME: SEAT/OBSERVER 2:00/ —	TIME: SEAT/OBSERVER 2:00 / —	TIME: SEAT/OBSERVER 2+00 / 2+00	TIME: SEAT/OBSERVER 3+00 / 3+00	TIME: SEAT/OBSERVER 3.5 / 3.5
INSTRUCTOR (NAME) GLEASON	INSTRUCTOR (NAME) GLEASON	INSTRUCTOR (NAME) Joucy	INSTRUCTOR (NAME) Joucy	INSTRUCTOR (NAME) Jouch

Simulator ~~Check~~/ Type Rating Satisfactory.	CHECK AIRMAN: (NAME) J. SEATON (SIGN) DEN ACDO	DATE 25 July 83.

HANDS ON EMERGENCY EQUIPMENT AND AIRCRAFT WALK-AROUND TRAINING (Details on pg.3, IV)

Walkaround Training Accomplished. Emergency Equipment Location, Operation and Demonstration Complete.	INSTRUCTOR: (NAME) J. DuBois (SIGN) 5 APRIL 83 / 15 JUN 83. (O/S RECORDS).	DATE 15 JUNE 85

AIRPLANE

PERIOD 1 DATE 8-2-83	FLIGHT NO. TRNG 8.	AIRCRAFT NO. 8968U	TIME :20	LANDINGS 2	NAME OF INSTRUCTOR J. GLEASON
PERIOD 2 DATE	FLIGHT NO.	AIRCRAFT NO.	TIME	LANDINGS	NAME OF INSTRUCTOR

Approved Airplane Training Course Completed. INSTRUCTOR: (SIGN) Joseph Gleason	TOTAL TIME :20	TOTAL LANDINGS 2	☐ NIGHT TAKEOFF AND LANDING REQUIREMENT SATISFIED
Airplane Check/ [✓ Type Rating Satisfactory].	CHECK AIRMAN (NAME) FAA N. BRADSHAW (SIGN)		DATE 8-2-83

ARROW AIRWAYS, INC.

FORM OT-4
REVISION 8
6/1/82
Page 2

GRADING: S - Satisfactory
U - Unsatisfactory
I - Incomplete (or Instructed In - - -)

I. NORMAL PROCEDURES	CPM/CPT	SIM 1	SIM 2	SIM 3	SIM 4	SIM 5
1. PREFLIGHT	S					
a. Safety Check	S					
b. Checklist/Flow Philosophy	S					
c. Cockpit Preflight	S					
d. Cabin Preflight						
e. Exterior Preflight						
f. Fuel Loading/Verification	S					
h. Enroute/Alternate/Reserve Fuel Plan.	S					
i. Takeoff Data Determination	S					
j. Max Takeoff Weight Determination	S					
2. DEPARTURE						
a. Checklists and Flows	S					
b. Start Procedures	S					
c. Pretaxi/Taxi/Takeoff/After Takeoff	S					
d. Climb/Enroute Fuel Management	S					
e. Engine Monitoring	S					
3. ARRIVAL						
a. Checklists and Flows	S					
b. Landing Data	S					
c. Securing	S					
d. Post Flight Duties	S					
4. SYSTEMS						
a. Aircraft General	S					
b. Air Conditioning & Pressurization	S					
c. Autopilot	S					
d. APU/EPU	N/A					
e. Communications	S					
f. Electrical	S					
g. Equipment Cooling	S					
h. Fire Detection & Protection	S					
i. Flight Controls & ~~Mach Trim~~ PTC	S					
j. Flight Instruments	S					
k. Fuel	S					
l. Hydraulic	S					
m. Ice & Rain Protection	S					
n. Landing Gear and Brakes/Anti-skid	S					
o. Navigation	S					
p. Pneumatics	S					
q. Power Plant	S					
r. Warnings	S					

II. ALTERNATE/ABNORMAL PROCEDURES	CPM/CPT	SIM 1	SIM 2	SIM 3	SIM 4	SIM 5
1. CARGO DOOR	S					
2. AIR CONDITIONING						
a. Pack Overheat/Trip Off	N/A					
b. Duct Overheat	N/A					
c. Coolant Air System	S					
d. Auto/Manual Temperature Control	S					
e. Freon ~~Programmer~~	S					
f. Freon Compressor Motor Lockout	N/A.					
3. PRESSURIZATION						
a. Unable To Pressurize After T. O.	S					
b. Unscheduled Cabin Climb	S					
c. Equipment Cooling ~~NO AIRFLOW Light~~	S					
d. Pneumatic Control	N/A					
e. Electronic Control	S					
4. AUTOPILOT - YAW DAMPER	S					
5. ELECTRICAL						
a. ~~Essential~~ BUS Power Failure Warning	S					
b. CSD Low Pressure Lt./High Rise Temp	S					
c. ~~ATR/CB/CCB/Other~~ Light Trips	S					
d. Generator Inoperative Dispatch	S					
e. Battery/~~Charger~~	S					
f. T/R CBs ~~and Reverse Current Contact~~	S					
6. FLIGHT CONTROLS						
• a. Jammed Stabilizer	S					
b. Mach/Pitch Trim	S					
• c. Yaw Damper/Rudder Boost	S					
• d. Alternate Flap/~~Split Flaps~~	S					
7. FLIGHT INSTRUMENTS						
a. EIFIS/CADS Failure	S					
b. Instrument Warnings	S					
c. Radio Altimeter/GPWS Failure	S					
8. FUEL						
• a. Fuel Dumping	S					
• b. Minimum Fuel Go-around	S					
c. Boost Pumps	S					
d. Quantity Gages/Tank Leaks	S					
e. Crossfeed Valve/Engine Fuel Valve	S					

CPM/CPT	INSTRUCTOR (NAME)	(SIGN)
1		
2		
3	CK Scully	
4	CK Scully	
5		

STUDENT NAME M. SANTOMAS

INSTRUCTIONS:

CPM/CPT – Train in all procedures as appropriate.
SIM – Train in all maneuvers possible, procedures as appropriate.
A/C – Train in all maneuvers as appropriate.

FORM OT-4
REVISION 8
6/1/82
Page 3

ARROW AIRWAYS, INC.

II. ALTERNATE/ABNORMAL OPERATION	CPU/CPT	SIM 1	SIM 2	SIM 3	SIM 4	SIM 5
9. HYDRAULICS						
* a. Failed Hydraulic System	S					
* b. Rear/Auto Manual Gear Extension	S					
c. Hydraulic/Aux. Low Pressure/Quantity	S					
d. SYS/BOARD Interconnect	N/A					
e. Gear Handle Will Not Go To UP	S					
f. Gear Warning	S					
g. Emergency Brake/Antiskid	S					
10. ICE AND RAIN PROTECTION						
a. Wing Anti-Ice Valves	S					
b. Engine Anti-Ice Valves	S					
c. Static/Pitot Heat	S					
d. Cockpit Window/Heat	S					
e. Bleed Corrections	S					
11. [illegible]						
12. PNEUMATICS						
a. Turbocompressor Low Oil Pressure	S					
b. T.C. Overspeed	S					
c. T.C. Overheat/Overpressure	S					
d. T.C. Will Not Start/Stop	S					
13. POWERPLANT						
a. Low Start Pressure	S					
b. Engine Will Not Turn	S					
c. Hung Start	S					
d. Hot Start/EGT Overtemperature	S					
e. No EGT Rise During Start	S					
f. P_1 or C_1 Temp Indication	S					
g. Engine Stall	S					
h. Fuel Heat Valve	N/A					
i. Engine Overspeed	S					
j. Oil Temperature High/Low	S					
k. Oil Pressure High/Low	S					
l. Oil Quantity Low	S					
14. WARNINGS						
a. Speed High/Low	S					
b. Altitude	S					
c. GPWS	S					
d. Configuration: Takeoff/Landing	S					
e. Door	S					
f. Fire	S					

GRADING: S - Satisfactory, U - Unsatisfactory,
I - Instructed in or Incomplete.

III. EMERGENCY PROCEDURES	CPU/CPT	SIM 1	SIM 2	SIM 3	SIM 4	SIM 5
1. ENGINE FIRE/SEVERE DAMAGE/SEPARATION	S					
2. WHEEL WELL FIRE	N/A					
3. SMOKE SOURCE IDENTIFICATION	S					
4. ELECTRICAL SMOKE OR FIRE	S					
5. F-PANEL ISOLATION	N/A					
6. MAIN CABIN CARGO SMOKE OR FIRE	S					
7. AIRCONDITIONING SYSTEM SMOKE	S					
8. SMOKE CONTROL: CABIN OR COCKPIT	S					
9. EMERGENCY DESCENT	S					
10. RUNAWAY STABILIZER	S					
11. LOSS OF ALL GENERATORS	S					
12. COCKPIT WINDOW CRACKED OR ARCING	S					
13. EMERGENCY LANDING OR DITCHING	S					
14. LAND EVACUATION	S					
EMERGENCY EQUIP./DOOR/EXIT AND WALK-AROUND TRAINING						
IV. EMERGENCY EQUIPMENT						
1. OXYGEN	S					
a. Crew/Passenger Accommodation	S					
b. Passenger	S					
c. Crew/Passenger Portable	S					
d. Minimum Pressures	S					
2. EXIT LIGHTS						
a. Fixed/Portable Interior	S					
b. Exterior	S					
3. EMERGENCY EXITS						
a. Entry/Galley Door/Slide Operation	S					
b. Auxiliary Hatch Slide (Some F A/C)	S					
c. Overwing Hatch Operation	S					
d. Cockpit Escape Rope/Tape	S					
4. PORTABLE FIRE EXTINGUISHERS						
a. Water	S					
b. CO_2/HALON	S					
c. Dry Chemical	S					
5. LIFE RAFTS AND SURVIVAL EQUIPMENT	S					
6. LIFE JACKETS	S					
7. PORTABLE EMERGENCY TRANSMITTER	S					
8. MEGAPHONES	S					
9. CRASH AXE	S					
10. FIRST AID KITS	S					
11. EMERGENCY FLASHLIGHTS	S					

STUDENT NAME: M. Sannenis

ARROW AIRWAYS, INC.

FORM OT-4
REVISION 8
6/1/82
Page 2

GRADING: S - Satisfactory
U - Unsatisfactory
I - Incomplete (or Instructed in - - -)

I. NORMAL PROCEDURES	CPM/CPT	SIM 1	SIM 2	SIM 3	SIM 4	SIM 5
1. PREFLIGHT	S					
a. Safety Check	S					
b. Checklist/Flow Philosophy	S					
c. Cockpit Preflight	S					
d. Cabin Preflight	–					
e. Exterior Preflight	–					
f. Fuel Loading/Verification	–					
h. Enroute/Alternate/Reserve Fuel Plan.	S					
i. Takeoff Data Determination	S					
j. Max Takeoff Weight Determination	S					
2. DEPARTURE	S					
a. Checklists and Flows	S					
b. Start Procedures	S					
c. Pretaxi/Taxi/Takeoff/After Takeoff	S					
d. Climb/Enroute Fuel Management	S					
e. Engine Monitoring	S					
ARRIVAL	–					
a. Checklists and Flows	S					
b. Landing Data	S					
c. Securing	S					
d. Post Flight Duties	S					
4. SYSTEMS	S					
a. Aircraft General						
b. Air Conditioning & Pressurization						
c. Autopilot	S					
d. APU/EPU						
e. Communications						
f. Electrical	S					
g. Equipment Cooling						
h. Fire Detection & Protection						
i. Flight Controls & Mach Trim						
j. Flight Instruments	S					
k. Fuel						
l. Hydraulic	S					
m. Ice & Rain Protection	S					
n. Landing Gear and Brakes/anti-skid						
o. Navigation						
p. Pneumatics						
Power Plant						
r. Warnings						

II. ALTERNATE/ABNORMAL PROCEDURES	CPM/CPT	SIM 1	SIM 2	SIM 3	SIM 4	SIM 5
1. [illegible]						
2. AIR CONDITIONING						
a. Duct Overheat/Trip Off	S					
b. Duct Overheat	S					
c. Coolant Air System	S					
d. Auto/Manual Temperature Control	S					
e. Freon Programmer	S					
f. Freon Compressor Motor Lockout	S					
3. PRESSURIZATION	S					
a. Unable To Pressurize After T. O.	S					
b. Unscheduled Cabin Climb	S					
c. Equipment Cooling NO AIRFLOW Light						
d. Pneumatic Control						
e. Electronic Control						
4. AUTOPILOT - YAW DAMPER	S					
5. ELECTRICAL						
a. Essential Power Failure Warning						
b. CSD Low Pressure Lt./High Rise Temp						
c. DTB/GB/GCR/Other Light Trips						
d. Generator Inoperative Dispatch						
e. Battery/Charger						
f. T/R CBs and Reverse Current Control						
6. FLIGHT CONTROLS						
a. Jammed Stabilizer						
b. Mach/Pitch Trim						
c. Yaw Damper/Rudder Boost						
d. Alternate Flap/Split Flaps						
7. FLIGHT INSTRUMENTS						
a. SIFIS/CADC Failure	S					
b. Instrument Warnings	S					
c. Radio Altimeter/GPWS Failure	S					
8. FUEL						
a. Fuel Dumping						
b. Minimum Fuel On-Ground						
c. Boost Pumps						
d. Quantity Gages/Tank Leaks						
e. Crossfeed Valve/Engine Fuel Valve						

CPM/CPT	INSTRUCTOR (NAME)	[illegible]
1	J. GRIFFIN	John Griffin
2		
3		
4		
5		

INSTRUCTIONS:

CPM/CPT = Train in all procedures as appropriate.
SIM = Train in all maneuvers possible, procedures as appropriate.
A/C = Train in all maneuvers as appropriate.

STUDENT NAME: SAN JEHIS

FORM OT-4
REVISION 8
6/1/82
Page 3

ARROW AIRWAYS, INC.

RMAL OPERATION	[illegible]	SIM 1	SIM 2	SIM 3	SIM 4	SIM 5
ion	S					
or Extension	S					
ssure/Quantity	S					
ect	S					
Go To [illegible]	S					
	S					
skid	S					
on	S					
e						
tion						
l Pressure						
sure						
e						
	S					
	S					
ature						
	S					
	S					
ding						

y, U - Unsatisfactory,
In or Incomplete.

III. EMERGENCY PROCEDURES	[illegible]	SIM 1	SIM 2	SIM 3	SIM 4	SIM 5
1. ENGINE FIRE/SEVERE DAMAGE/SEPARATION	S					
2. WHEEL WELL FIRE	S					
3. SMOKE SOURCE IDENTIFICATION	S					
4. ELECTRICAL SMOKE OR FIRE	S					
5. P-PANEL ISOLATION	S					
6. MAIN CABIN CARGO SMOKE OR FIRE	S					
7. AIRCONDITIONING SYSTEM SMOKE	S					
8. SMOKE CONTROL: CABIN OR COCKPIT	S					
9. EMERGENCY DESCENT	S					
10. RUNAWAY STABILIZER	S					
11. LOSS OF ALL GENERATORS	S					
12. COCKPIT WINDOW CRACKED OR ARCING	S					
13. EMERGENCY LANDING OR DITCHING	S					
14. LAND EVACUATION	S					
EMERGENCY EQUIP./DOOR/EXIT AND WALK-AROUND TRAINING						
IV. EMERGENCY EQUIPMENT						
1. OXYGEN						
a. Crew/Passenger Accommodation						
b. Passenger						
c. Crew/Passenger Portable						
d. Minimum Pressures						
2. EXIT LIGHTS						
a. Fixed/Portable Interior						
b. Exterior						
3. EMERGENCY EXITS						
a. Entry/Galley Door/Slide Operation						
b. Auxiliary Hatch Slide (Some C A/C)						
c. Overwing Hatch Operation						
d. Cockpit Escape Rope/Tape						
4. PORTABLE FIRE EXTINGUISHERS						
a. Water						
b. CO_2/HALON						
c. Dry Chemical						
5. LIFE RAFTS AND SURVIVAL EQUIPMENT						
6. LIFE JACKETS						
7. PORTABLE EMERGENCY TRANSMITTERS						
8. MEGAPHONES						
9. CRASH AXE						
10. FIRST AID KITS						
11. EMERGENCY FLASHLIGHTS						

STUDENT NAME: SAN JEHIS

ARROW AIRWAYS, INC.

FORM OT-4 6/1/82
REVISION 0 Page 4

V- MANEUVERS - Captain and First Officer All Maneuvers will be accomplished in accordance with the Flight Manual	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1. TAXIING			S			
2. TAKEOFFS	S		S			
.01 NORMAL	S	S	S	S		
.02 CROSSWIND		S			S	
.03 LOW VISIBILITY – 100-FOOT CEILING	S	S	S	S	S	
.04 REJECTED		S	S	S	S	
.05 ENGINE FAILURE AFTER V1	S	S	S	S	S	
3. CLIMBS						
.01 NORMAL ENROUTE	S		S	S		
.02 TWO/THREE ENGINE BEST PERFORMANCE	S	S	S	S		
4. AIRWORK						
.01 STEEP TURNS	I		S	S		
.02 APPROACH TO STALL	I		S	S		
.03 ENGINE OUT RUDDER CONTROL	I	S	S	S	S	
.04 MACH EFFECTS			S			
.05 AREA DEPARTURE AND ARRIVAL	S	S	S			
.06 HOLDING	S	S	S	S		
.07 ACCELERATION TO VMO		S	S			
.08 LATERAL CONTROL		S	S			
.09 DUTCH ROLL			S			
.10 HIGH DESCENT RATE RECOVERY DEMONSTRATION			S			

	SIM 1	SIM 2	SIM 3	SIM 4	SIM 5	[illegible]
5. DESCENTS						
.01 NORMAL DESCENTS	S	S		S		
.02 RAPID (EMERGENCY) DESCENT			S		S	
6. INSTRUMENT APPROACHES						
.01 ILS – FLIGHT DIRECTOR	S	S	S	S		
.02 ILS – COUPLED	–	–		S		
.03 ILS – TWO/THREE ENGINE	S	S	S		S	
.04 ILS – GLIDESLOPE OUT						
.05 ILS – BACKCOURSE				S		
.06 VOR, VOR/DME, ADF	I	S	S	I		
.07 NDB	I	S	S	S	S	
.08 ASR RAW DATA		I				
.09 CIRCLING APPROACHES	S	S	S		S	
7. LANDINGS						
.01 NORMAL – FROM VISUAL APPROACH	S	S		S		
.02 CROSSWIND		S			S	
.03 REJECTED		S			S	
.04 THREE ENGINE	I	S	S	S		
.05 TWO ENGINE		S	S		S	
.06 ONE ENGINE				S		
.07 ABNORMAL FLAPS						
.08 MANUAL STABILIZER					S	
.09 JAMMED STABILIZER			S			
.10 BALKED LANDING RECOVERY DEMONSTRATION						
.11 MANUAL REVERSION						

CPH/CPT – Train in all procedures as appropriate.
SIM – Train in all maneuvers possible, procedures as appropriate.
A/C – Train in all maneuvers as appropriate.

GRADING: (S) Satisfactory, (U) Unsatisfactory, (I) Incomplete (or "Instructed In").

COMMENTS: #1 Needs more work on engine out rudder control.
#2 Good sim session.
#3 Excellent Ride
#4 Very Good Ride
#5 Ready for sim rating.

Approved Simulator Training Course Completed, Recommended for Simulator Check/Type Rating	INSTRUCTOR: (NAME) JOHN GRIFFIN (SIGN) John Griffin	DATE 10/20/82

STUDENT NAME: SAM JONES

FLIGHT OPERATIONS

NAME M. SAN JENIS STATUS FC REGNUM 6289 DOM MIA

	RECURRENT	SIM PC	SIM S/A	A/C S/A	AIRCRAFT
FAA NAME	Simulator	Simulator 727-173	Simulator	Aircraft	Aircraft
	Date	Date 6-24-72	Date	Date	Date
Total Hrs Sim H-OP	Instructor	Instructor [illegible]	Instructor	Instructor	Instructor
Total Hrs A/C CHK AMN/CAPT	Time	Time 2:00	Time	Time	Time
1 Briefing and Equipment Examination		3			
2 Preflight Inspection		3			
3 Taxiing		2			
4 Takeoff - Rejected		3			Ind
5 Takeoff - Normal		3			
6 ● Takeoff - Instrument	/	3	●	●	
7 Takeoff - Crosswind		3		Ind	Ind
8 Takeoff - Engine Failure After V_1		3	●	●	
9 ● Area Departure/Area Arrival (S/T Both Required) (S/A or P/C 1 of Either One)		3			
10 ● Holding		3	Ind		Ind
11 ● Steep Turns		3	Ind Capt		Ind Capt
12 ● Approaches to Stall (Clean & Landing Config) Ind (S/A or P/C)		3			
13 Specific Flight Characteristics		W	Ind		Ind
14 Powerplant Failure		3			
15 ● Precision Approaches					
a. ILS Autopilot		—	●	●	●
b. ILS Flight Director		3			
c. Landing from ILS Approach		3		●	Ind
d. ILS Autopilot - Autoland		—	●	●	●
e. Missed Approach		3	●	●	●
16 ● Non-Precision Approaches (Two Required)					
a. [✓ VOR] c. ASR		3	●	●	●
b. ADF d. [✓ LOC (FB)]		3	●	●	●
e. Missed Approach		3	● Capt	● Capt	Capt
17 Landing - Normal		3			
18 Landing - Crosswind		3		Ind	Ind
19 Landing - Rejected		3	●	●	●
20 Landing - 2 Eng. Inoperative		3	●	●	●
21 Normal and Abnormal Procedures		3			
22 Emergency Procedures		3			

● When accomplished in visual simulator, need not be performed in aircraft. [illegible]

NOTE: On S/A one non-precision approach may be signed off in simulator [illegible] approved visual not used.

● Must be [illegible] when performed in [illegible]
Ind May be waived [illegible] qualified & [illegible]
Ind May be waived subject to [illegible]
Visual req. for [illegible]

FLIGHT OPERATIONS

NAME M. SAN JENIS STATUS FC REGNUM 6283 DOM MIA

		RECURRENT	SIM PC	SIM S/A	A/C S/A	AIRCRAFT
	FAA NAME	Simulator	Simulator 727-1?5	Simulator	Aircraft	Aircraft
		Date	Date 6-21-??	Date	Date	Date
Total Hrs Sim	H-CA	Instructor	Instructor CUPER	Instructor	Instructor	Instructor
Total hrs A/C	CHK AMN/CAPT	Time	Time 2:00	Time	Time	Time
1	Briefing and Equipment Examination		5			
2	Preflight Inspection		5			
3	Taxiing		2	▨		
4	Takeoff - Rejected		3		▨	(sd)
5	Takeoff - Normal		5	▨		
6 ●	Takeoff - Instrument	/	5	#	#	
7	Takeoff - Crosswind		5	▨	(sd)	(sd)
8	Takeoff - Engine Failure After V_1		5	#	#	
9 ●	Area Departure/Area Arrival (R/T Both Required) (S/A or P/C (sd) Either One)		5		▨	
10 ●	Holding		5	(sd)	▨	(sd)
11 ●	Steep Turns		[illegible]	(sd) Capt	▨	(sd) Capt
12 ●	Approaches to Stall (Clean & Landing Config.) (sd) (S/A or P/C)		5		▨	
13	Specific Flight Characteristics		[illegible]	(sd)	▨	(sd)
14	Powerplant Failure		5		▨	
15 ●	Precision Approaches					
	a. ILS Autopilot		—	#	# #	#
	b. ILS Flight Director		3			
	c. Landing from ILS Approach		5		#	(sd)
	d. ILS Autopilot - Autoland		—	#	# #	#
	e. Missed Approach		5	#	# #	#
16 ●	Non-Precision Approaches (Two Required)					
	a. [✓ VOR] c. ASR		5	#	#	#
	b. ADF d. [✓ LOC (?)]		5	#	#	#
	e. Missed Approach		5	# Capt	# Capt	Capt
17	Landing - Normal		5	▨		
18	Landing - Crosswind		5	▨	(sd)	(sd)
19	Landing - Rejected		5	#	#	#
20	Landing - 2 Eng. Inoperative		5	#	#	#
21	Normal and Abnormal Procedures		5			
22	Emergency Procedures		5		▨	[illegible]

When accomplished in visual simulator, need not be performed in aircraft. [illegible]

NOTE: On S/A one non-precision approach may be signed off in simulator if [illegible] approval visual not used.

● Must be flighted when performed in [illegible]
(sd) May be waived [illegible]
(trsd) May be waived subject to conditions [illegible]
Visual req. for R/T and S/A [illegible]

Received by
Subcommittee on Investigations
JAN 10 1986

EXHIBIT NO. 4

STUART A. GOLDSTEIN
LAW OFFICES
RIVERGATE PLAZA
444 BRICKELL AVENUE, SUITE 200
MIAMI, FLORIDA 33131

STUART A. GOLDSTEIN
AVIATION LAW
MICHAEL E. REHR
OF COUNSEL

(305) 358-5800
CABLE "CAUSA" MIAMI
TELEX 441366 CBZ UI

January 7, 1986

Susan Lebeaux, Esquire
Senate Permanent Sub-Committee
On Investigations
Russell Senate Office Building
Room 100
Washington, D.C. 20510

Dear Susan:

I very much enjoyed our telephone conversation yesterday in reference to the possibility of an Arrow Air pilot and/or myself participating in the upcoming hearings which your Committee has scheduled on various issues relating to airline safety.

I am enclosing for your review a copy of the decision in Pavolini v. Bard-Air Corp., 645 F. 2d 144 (2d Cir 1981). This is the case I mentioned to you in our conversation. You will note that Mr. Pavolini was fired by his employer because he complained to the FAA about discrepancies concerning aircraft maintanance, flight time/duty time limitations and an allegation that he was told to falsify a flight record.

The Second Circuit Court of Appeals held that there is no private right of action under the Federal Aviation Act because Mr. Pavolini's claimed injuries, which were allegedly caused by his discharge, do not fall within the ambit of the Federal Aviation Act : " ...the Act does not require an air carrier to continue to employ an employee for any reason, nor does the Act prohibit a carrier from discharging an employee for reporting safety violations to the FAA. " (page 147).

If the Second Circuit is correct, and I note that it cited no decision in support of its conclusion, then a pilot who is discharged for refusing to fly an aircraft in reliance on the Federal Aviation Regulations, would similarly have no protection from a discharge in the absence of a grievance procedure in a collective bargaining agreement. As I mentioned to you, the problem is especially significant in an employment-at-will state such as Florida where an employer may discharge an employee for any reason or for no reason in the absence of a contract of employment which has a specific period of duration. In that regard, I am enclosing an excerpt from a recent Academy Of Florida Trial Lawyers Journal which sets forth the employment-at-will law as it currently exists in Florida.

I have attached to this letter some brief biographical information in the event you would like me to testify at your hearings.

Sincerely,

Stuart

Stuart A. Goldstein

SAG/als

EXHIBIT NO. 5

ARROW AIR, INC.

SPECIAL INSPECTION REPORT

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
SOUTHERN REGION
FEBRUARY 21, 1986

TABLE OF CONTENTS

SECTION A EXECUTIVE SUMMARY

SECTION B OPERATIONS FINDINGS

SECTION C AIRWORTHINESS FINDINGS

SECTION A
EXECUTIVE SUMMARY

The National Inspection Team (NIP) commenced inspection of Arrow Air, Inc. on January 21, 1986 at Miami International Airport. This inspection was directed by the Secretary of Transportation to the Federal Aviation Administration (FAA) to conduct an in-depth inspection of airline operating under military charter.

The Inspection Team members were:

Team Leader

Vincent J. Lepera	AEA

Operations Team Leader

Joseph Dillon	ASO

Operation Team Members

Richard Millstrip	AGL
Joseph McDonnell	ASW
Carolyn Johnson (Cabin Safety Specialist)	ACE

Airworthiness Team Leader

Larry Vaughan	ASO

Airworthiness Team Members

George Chopay	AEA
Paul Erickson	ASO
Robert Mulvaney	ACE

Records Examination Assistance Program (REAP) Members

Roger Phaneuf
Kelly Goode
Lisa Markle

Arrow Air, Inc. is a certificated air carrier operating under domestic and flag rules of the Federal Aviation Regulation (FAR) Part 121. At the start of this inspection, Arrow operated ten (10) DC-8s (50 and 60 series) and two (2) Boeing 727s. During the inspection Arrow Air removed several aircraft from the Aircraft Listing due to a reduced schedule as a result of inspection findings concerning use of non-approved parts from foreign air carriers. The company employs ninety-nine (99) Flight Crew Members, seventy-seven (77) Flight Attendants, eleven (11) Dispatchers/Flight Followers and forty-three (43) Airframe and Powerplant Mechanics. Heavy maintenance is contracted to

Batch-Air, Inc., FAA Approved Repair Station, Miami, Florida. The majority of aircrew training is conducted in Miami, Florida by Arrow Air; however, they use United Airlines' simulators to satisfy flight training requirements.

The team assembled at the South Florida FSDO-65 on January 21, 1986, where they prepared themselves for the inspection of the carrier by reviewing manuals, operation specifications and discussion with assigned FAA inspectors. This was considered necessary since none of the team members had any previous knowledge of the carrier. All team members selected were highly qualified in their respective area, which enabled the team to conduct an in-depth inspection of the carrier's ability to comply with the Federal Aviation Regulations.

The systems inspected consisted of the following areas:

Operations

Management
Operations Specifications
Manuals and Procedures
Training Programs
Records Systems
Station Facilities
Dispatch and Flight Release
Flight and Duty Time
Airport Analysis and Performance
Minimum Equipment List (MEL) and Configuration
Deviation List (CDL)

Airworthiness

Management
Operations Specifications
Manuals and Procedures
Training Programs
Records System
Maintenance Facilities
Weight and Balance
Airworthiness Directives Compliance
Maintenance/Reliability Program
Maintenance Inspection System
Continuous Analysis and Surveillance Program
Fueling and Servicing
Deferred Maintenance Items

NOTE:

At the time of this inspection, no aircraft were scheduled in for heavy maintenance checks ("C" check), therefore no observations could be made concerning the condition of the aircraft structure and the effectiveness of Arrow Air, Inc. corrosion control program. It is recommended that this portion of the NIP be scheduled when Arrow Air, Inc. has an aircraft undergoing a "C" check.

SECTION B

OPERATIONS REPORT CONTENTS

1.0 OPERATIONS

1.1 OPERATIONS MANAGEMENT

1.2 OPERATIONS SPECIFICATIONS (OPERATIONS)

1.3 MANUALS (OPERATIONS)

1.4 TRAINING PROGRAMS (OPERATIONS)

1.5 RECORDS SYSTEM (OPERATIONS)

1.6 STATION FACILITY

1.7 DISPATCH & FLIGHT RELEASE

1.8 FLIGHT AND DUTY TIME

1.9 AIRPORT ANALYSIS AND PERFORMANCE

1.10 MINIMUN EQUIPMENT LIST (MEL) AND CONFIGURATION DEVIATION LIST (CDL)

1.2 OPERATIONS SPECIFICATIONS (OPERATIONS)

DESCRIPTION:

Arrow operates under an Air Carrier Operating Certificate, and Domestic and Flag Air Carrier Operations Specifications. Initially, over half of their actual operation was scheduled passenger service with the balance composed of military contract and cargo service. This was scaled down to an all cargo operation by the end of the inspection.

INSPECTION DATA:

The inspection consisted of a review of Arrow's Operations Specifications to determine compliance with Federal Aviation Regulation (FAR) requirements and FAA Inspector Handbook requirements.

FINDING:

1.2.1

Diego Garcia is not listed in Arrow's Operations Specifications. Arrow operates military contract flights into Diego Garcia. Since Section 121.45 of the FAR requires areas of operations to be listed and since Arrow is operating into the unlisted Diego Garcia area, it appears that Arrow is operating contrary to their Operations Specifications and Section 121.3 of the FAR.

Reference EIR#86S0650016

1.2.2

There are no amendments to Arrow's Operations Specifications to reflect lease agreement data. Arrow conducts "sub service" type operations, with PART 129 operators, for which Arrow provides at least the aircraft and crew. Section 121.6 of the FAR requires, in this situation, that the Administrator Principal Operations Inspector (P.O.I.) be given in writing (from Arrow) the terms of the lease arrangement so that the operations specifications may be amended to contain the data required by Section 121.6(b) of the FAR.

Reference EIR#86S0650017

1.2.3

Arrow's Operations Specifications authorize Arrow to use Precision Approach Radar (PAR) and Airport Surveillance Radar (ASR) approaches in their operations. While Arrow's training records indicate that they are training in these maneuvers, their training curriculum contains very little evidence of how these approaches are to be performed. Section 121.403(b)(3) of the FAR requires that the training curriculum provide detailed descriptions and pictorial displays of maneuvers, procedures and functions that are to be performed during inflight portions of flight training and flight checks.

1.3 MANUALS (OPERATIONS)

Description:

Arrow's manual system is composed of several "sub-manuals" (e.g. Pilot Operating Manual, General Operating Manual, etc.) which, together, satisfy the requirements for the operations portion of the FAA required "manual".

Arrow's operations manuals consist of the General Operations Manual (GOM), Boeing 727 Airplane Operating Manual (AOM), DC-8 and Boeing 727 Airplane Operating Manuals, Company Training Manual, Flight Attendant Manual, and Jeppesen Manuals. There is also a bulletin system to supplement these manuals.

Inspection Data:

All company operations manuals were viewed by the inspection team for compliance with FAR's and FAA recommendations.

Finding:

1.3.1

Arrow's crewmember Bulletin Booklet is not in a form that provides for easy, timely revision (Section 121.135(a)(2) of the FAR). A memo dated January 30, 1985 states that "as each bulletin becomes a part of the GOM or AOM, the subject bulletin will be removed"; however, the company does not have a specific procedure for removal of outdated bulletins and keeping the Booklet up-to-date (e.g. a list of effective bulletin pages on each new bulletin page).

1.3.2

Arrow's DC-8 Aircraft Operating Manual Chapter 49-004, pertaining to aircraft weight and balance control, does not contain weight and balance data for the DC-8 aircraft currently operated by Arrow. This data is required by Sections 121.133(a) and 121.135(b)(20) of the FAR and referenced in Part E of their Operations Specifications.

Reference EIR #86S0650019

1.3.3

The aft flight attendants ditching evacuation seat assignments contained in Arrow's Boeing 727 operating manual are not correct.

Page 4040, Paragraph 1, dated 8-30-85 indicates that aft stationed flight attendants, required by Section 121.391 of the FAR, are to occupy the aisle seats adjacent to the over wing exit during a ditching evacuation. This is contrary to Section 121.311(f) of the FAR and the Flight Attendant Manual. Arrow does not have flight attendant jump seats that meet the requirements of Section 25.785 of the FAR for the aisle seats adjacent to the over wing exit.

1.3.4

Arrow's flight attendant manual contains information on aircraft that are not presently listed in Arrow's Operations Specifications. Section 121.135(a)(4) of the FAR requries that the company "manual" be in conformance with their operations specifications.

1.3.5

The Boeing 727 Aircraft Section, Section XX, of Arrow's Flight Attendant Manual does not contain safety information concerning Auxiliary Power Unit (APU) torching.

Due to the location of the aft flight attendant jumpseats, there is a limited view of the right wing area. This has been a problem during APU torching in that area because, in the past, the torching has been mis-interpreted as a fire on the wing and unwarranted evacuations have occured.

This information should be included in the flight attendant manual to allow for the transmission of knowledge that would allow Arrow flight attendants to perform their duties with the high degree of safety required by Section 121.135 of the FAR.

1.3.6

Arrow's Flight Attendant Training Manual Records contain the following miscellaneous discrepancies:

1. The portable emergency equipment list on page 32 does not include the dry chemical fire extinguisher.

2. Arrow choosec to record all test scores; however, this page as written does not include the Boeing 727 aircraft test.

3. The Basic Indoctrination/Initial Training report and Recurrent Training form, as written, do not require a hands-on competency check on the Boeing 727-200 doors or aft stair exit in the normal or emergency mode as required by Section 121.417(c)(1) of the FAR.

1.3.7

Arrow's passenger emergency data cards contain the following discrepancies:

1. Some of the emergency data cards do not illustrate accurately how to release a seatbelt (FAA Advisory Circular 121.24).

2. The oxygen diagram (picture #3) does not depict pulling the strap ends with both hands to properly tighten the mask on the face (FAA Advisory Circular 121-24).

3. The alternate emergency landing brace position of arms crossed and hands on the seat back is not pictured on some safety cards. Past studies of emergency brace positions do not recommend the use of pillows as they do not afford protection, and clutter the aisles preventing fast egress to exit (Air Carrier Operations Bulletin A-79-76).

4. The life vest illustrations on the safety cards do not clearly depict the back flap when it is fully extended. Also, the safety cards do not show the procedural difference for the use of an adult life vest on a child (e.g. the waist straps must be placed between the legs and pulled tight. The straps are then tied around the waist and only one chamber of the vest inflated).

1.3.8

The Boeing 727 Airplane Operating Manual (AOM) contains several discrepancies:

1. One section of Volume I (there are two volumes to the Manual) is incomplete.

The Table of Contents for the Introduction, Section 0.000, showed the following:

(1) Record of Revision
(2) Aircraft Operating Manual Contents
(3) AOM Description
(4) Boeing 727 Airplane Identification
(5) List of Effective Pages

Items (3), (4), and (5) are not in the Manual.

2. Arrow has emergency procedures in Flight Operations Bulletin 86-1 that have no reference in the Boeing 727 Emergency Procedures Checklist or the Emergency Procedures Section of the AOM. Appropriate temporary modification to the checklist and manual would alert the user of the bulletin requirements.

3. Information on maximum structural weights for aircraft PP-SNG, and Boeing 727 operations generally, is incomplete.

Although Arrow currently operates only one Boeing 727-2AI aircraft, the AOM is filled with information about the -100 and -200 series. The differences, while somewhat confusing in presentation, are clearly marked. However, in the matter of structural weight limits, the manual is incomplete, and not properly marked. The limits published only pertain to aircraft PP-SNG. These weights are unusually high, and do not apply to other Boeing 727-200 aircraft. Additionally, the reductions to these weights which must be taken if certain tires are installed, are not published in the AOM. Since the weight reduction can be as great as 30,000 pounds the inclusion of that information would facilitate the Captain's review of compliance with weight restrictions prior to departure.

4. Maximum structural weight limitations in the Loading Section do not agree with, and are greater than, those in the Limitations Section.

Specifically, in Limitations, page 4.300, paragraph 8, it reads:

"Weights, Structural: Refer to the AOM Loadings Chapter." In Loading, page 2.030, paragraph 4, it reads:

"Maximum Landing Weight 160,000 pounds (flaps 30)"
"Maximum Landing Weight 158,000 pounds (flaps 40)"

Unfortunately, Limitations, page 4.300 paragraph 3, contains the following:

"Landing flaps, -15 and -17 airplanes: do not extend to 30 degrees unless the gross weight is 155,000 or less, or to 40 degrees unless the gross weight is 143,000 or less."

Further, the Chart, titled "-200 Critical Speeds" in Limitations, page 4.310, paragraph 4, does not provide threshold speeds for flaps 40 degrees, at weights which exceed 145,000 pounds.

This confusion arises because PP-SNG is not a standard Boeing 727-200. The AOM does not make that fact easily discernable to the airman.

1.4 TRAINING PROGRAMS (OPERATIONS)

Description:

Operational ground school training is in Miami, FL. Pilot and Flight Engineer flight training and checking is in Denver, CO. utilizing Arrow Check Airman and United Airlines facilities and equipment. Flight attendant training utilizes Arrow instructors, Arrow facilities in Miami, and Continental Airlines, Transamerica Airlines and Pan American World Airways facilities.

Inspection Data:

Inspection team personnel reviewed all approved training programs. In addition, partial surveillance was conducted on DC-8 Recurrent Ground School Training, Boeing 727 Recurrent Ground School Training and Security Training. All ground training was conducted at the Miami Airport Inn. Flight training, dispatcher training, and flight attendant training were not conducted during the inspection period.

Finding:

1.4.1

Arrow's flight attendant training program does not contain sufficient procedures for the use of FAA approved child/infant restraint systems aboard their aircraft.

FAA Air Carrier Operations Bulletin (ACOB) 8-76-48 contains guidelines for certificate holders to develop a program. Arrow's program consists of a flight attendant bulletin which identifies acceptable and unacceptable child/infant seats, the stowing of unacceptable seats, and the passenger service agents inspection responsibility; however, discussions with flight attendants during enroute inspections revealed that they are not familiar with the use of the seat once they are approved for use on the aircraft.

1.5 RECORDS SYSTEM (OPERATIONS)

Description:

Arrow's records system consists of pilot/flight engineer duty time records maintained by Crew Scheduling, flight attendant training records maintained by In-Flight Service, pilot/flight engineer training records maintained by Training, and dispatcher training and operations flight records maintained by Dispatch. All records are located at Arrow headquarters.

Flight time tracking (eg. total hours in a 30 day period) is accomplished through a computerized system that "tags" individuals as their flight time approaches a legal limit. Duty and rest time tracking is accomplished manually using a "Tracking Sheet" on which individuals and their daily flight hours are tracked. The Dispatch Master Log of current actual flight times and a master scheduling sheet are used to provide data for the Tracking Sheet.

Inspection Data:

The records inspection was conducted, primarily, by the Records Examination Assistance Program (REAP) team. Their inspection was supplemented by FAA inspector personnel.

The REAP team inspected the following records in the manner indicated:

1. Flight and duty time:
Flight times (total time within a given period of time) were checked for 26 pilots.
(a) one group of 10 pilots were checked over a one year period.
(b) one group of 16 pilots were checked over a 90 day period.

Rest periods were checked for 20 pilots.
(a) pilots were selected from the above group of 26 pilots.
(b) using a computer packet for the most recent 120 day period, those periods that appeared to have the heaviest flying were identified and checked.

2. Crewmember training:
Ten records were examined (same as for those pilots whose flight and duty time records were examined for 90 days) for current proficiency and line checks, initial operating experience, current medical, and recurrent emergency and hazardous materials training.

3. Dispatcher training:
All 8 dispatcher training records were examined for the following training requirements: basic indoctrination, initial, initial competency check, operating familiarity, yearly recurrent training, recurrent competency check, yearly operating familiarization, difference training, transition training and transition competency check.

4. Flight attendant training:

Nineteen flight attendant training records were examined for compliance with the following training program requirements: basic indoctrination, initial, transition, initial operating experience, emergency training recurrent training.

5. Dispatcher duty time:

The dispatcher schedule for the month of January was reviewed.

Flight records were examined by a member of the FAA inspection team. These records are kept, for a period of 90 days, in Arrow's dispatch section. Random inspections were also conducted by FAA inspection team personnel on 58 flight attendant training records and 6 pilot/flight engineer training records.

Finding:

1.5.1

Arrow's flight attendant training records contained many administrative errors in the recording of flight attendant training. While Arrow was able to substantiate that the training had been received, it is incumbent on Arrow to complete their forms in the manner which they themselves have prescribed.

1.5.2

The REAP team inspection of adherence to flight and duty time requirements revealed discrepancies in two areas: two crewmembers flying too many hours in a given period of time; and three crewmembers not receiving adequate rest.

Reference EIR's #86S0650020 - 86S0650024

1.6 STATION FACILITY

Description:

Arrow maintains 5 passenger and 5 cargo stations at 6 locations. They also have 4 other "out of country" facilities manned primarily with contract personnel.

Inspection Data:

The team performed station facility inspections at Miami (partial inspection) and San Juan. Other inspections were planned (both station and enroute inspections) but the curtailment of Arrow's operations precluded the accomplishment of those inspections. There were no findings as a result of station inspections other than the fact that the Miami station inspection substantiated suspicions that Arrow did not actually weigh passenger baggage as dictated in Part E of their Operations Specifications (this apparent non-compliance is dealt with in the maintenance portion of the report).

1.7 DISPATCH AND FLIGHT RELEASE

Description:

Arrow maintains their Dispatch/Flight Release Department in the Miami Headquarters. They employ a total of 8 certified dispatchers, 3 trainees and 5 maintenance coordinators.

Inspection Data:

An inspection was conducted of Arrow's dispatch/flight release facility.

Finding:

1.7.1

An enroute inspection disclosed no Minimum Equipment List (MEL) items in the section of the flight release where MEL items were to be noted; however, there were two MEL items noted in the log book. This indicates that dispatch was not aware of the number of MEL items and, as a result, not in possession of information necessary to perform their dispatcher duties.

1.8 FLIGHT AND DUTY TIME

SEE: 1.5 RECORDS SYSTEM

1.9 AIRPORT ANALYSIS AND PERFORMANCE

Description:

Arrow utilizes a tailored, tabulated data type system for takeoff and landing performance compilation. In the past, for the DC-8, this service was provided by Computer Consulting Systems (CCS) in New York; however, they are now in the process of transferring this DC-8 service to Stewart Aviation of Miami. The Boeing 727 data is also provided by Stewart Aviation.

Inspection Data:

The team conducted an inspection of Arrow's Airport Analysis and Performance system. No findings were noted.

1.10 MINIMUM EQUIPMENT LIST AND CONFIGURATION DEVIATION LIST (MEL/CDL)

Description:

Arrow maintains an MEL/CDL for their DC-8 and Boeing 727. The MEL/CDL is located in a separate binder and pre-positioned in the aircraft.

Inspection Data:

Both the DC-8 and the Boeing 727 MEL's were reviewed for conformity with the Master MEL (e.g., at least as restrictive) and adaptation to Arrow's operations.

Finding:

1.10.1

The Boeing 727 MEL has numerous operations procedures ("O" items) that are not clearly defined.

1.10.2

The Boeing 727 MEL contains reference (item 27-6) to an outdated Bulletin (#75-7).

SECTION C
AIRWORTHINESS REPORT CONTENTS

2.0 AIRWORTHINESS

- 2.1 MANAGEMENT (MAINTENANCE)
- 2.2 OPERATIONS SPECIFICATIONS (MAINTENANCE)
- 2.3 MANUALS AND PROCEDURES (MAINTENANCE)
- 2.4 TRAINING PROGRAMS (MAINTENANCE)
- 2.5 RECORD SYSTEMS (AIRWORTHINESS)
- 2.6 MAINTENANCE FACILITIES
- 2.7 WEIGHT AND BALANCE
- 2.8 AIRWORTHINESS DIRECTIVES COMPLIANCE
- 2.9 MAINTENANCE AND RELIABILITY PROGRAMS
- 2.10 MAINTENANCE INSPECTION SYSTEM
- 2.11 FUEL AND SERVICING
- 2.12 CONTINUOUS ANALYSIS AND SURVEILLANCE PROGRAM
- 2.13 DEFERRED MAINTENANCE ITEMS

2.1 MANAGEMENT (MAINTENANCE)

Description:

Arrow Air Policy Manual defines all Management and Supervisory Positions. The definitions include job titles, duties and responsibilities, minimum qualifications and their position location in the management structure. The positions described, eleven total, include nine that are directly responsible for the Maintenance, Inspection and Evaluation functions.

Inspection Data:

Inspection of this area was conducted by evaluation of the appropriate section of the General Maintenance Manual, discussions with personnel concerning background and experience.

Finding:

2.1.1

The position of Chief Inspector does not appear on the Key Personnel Page of the General Maintenance Manual. However, this position does appear on the Organization Chart and in the Job Description Section.

2.2 OPERATIONS SPECIFICATIONS (MAINTENANCE)

Description:

The Arrow Air Maintenance Operations Specifications consist of Parts D and E. Part D is further subdivided into three (3) sections consisting of:

Preface Pages.........................1 through 20
DC-8 Maintenance Pages.................1 through 20
Boeing 727 Maintenance Pages...........1 through 15

Part E consists of one (1) page describing the procedures for weight and balance calculations and weight and balance control of Arrow aircraft. It also describes the type of loading schedule to be used. Both DC-8 and Boeing 727 aircraft are loaded and weight and balance for flight calculated by the INDEX system.

Inspection Data:

A thorough review and edit of both Parts D and E of Arrow Air Operations Specifications were conducted. The operations specifications were checked for format, contents and typographical correctness. The DC-8 and Boeing 727 inspection and overhaul, inspection and check periods, were compared against the applicable termination service, "A" and "B" check sheet tasks. The results of this comparison are detailed in Section 2.9.

Finding:

2.2.1

Arrow Air Operations Specifications revealed the following omissions:

Section 121.25(b)(6) of the FAR requires that the operations specifications include time limitation. Several Boeing 727 aircraft parts are life limited by the manufacturer. These parts consist of several landing gear components which are specified in the type certificate data sheet A3-WE. Review of Arrow Air Operations Specifications for the Boeing 727 revealed that these parts are not listed in the operations specifications nor does the operations specifications reference a manual or any other identifiable publication that contain life limits.

The Boeing 727 Operations Specifications also revealed that ATA Chapter 71 "Powerplant" General which includes engine doors and engine mounts is omitted from Part D.

Operations Specifications Chapter 76 "Engine Controls" does not contain overhaul periods and inspection and check intervals.

Operations Specifications Chapter 72 does not contain information as to what type engine is installed on the Boeing 727 aircraft.

2.3 MANUALS AND PROCEDURES (MAINTENANCE)

Description:

Section 121.133 of the FAR requires that each domestic and flag air carrier prepare and keep current a manual for the use and guidance of flight and ground operations personnel in conducting its operations. Section 121.369 of the FAR requires that the certificate holder put in its manual a description or chart of its organization and programs required by Section 121.367 of the FAR that must be followed when performing maintenance, preventive maintenance and alterations. During the inspection the following Arrow Air manuals were reviewed.

1. General Maintenance Manual
2. DC-8 Maintenance and Inspection Program Manual
3. Boeing 727 Mainteance and Inspection Program Manual
4. Fueling Manual
5. Aircraft and Powerplant Reliability and Surveillance Manual
6. Pratt Whitney Aircraft JT3D-7 Overhaul Manual
7. Systems Component and Control Manual
8. Boeing 727 Maintenance Manual

Inspection Data:

Arrow Air manuals were reviewed for content, revision status, compliance with the Federal Aviation Regulations and accepted practices.

Finding:

2.3.1

Review of Arrow Air produced maintenance manuals shows they do not contain a list of effective pages. Section 121.135 of the FAR states that each manual required must be in a form that is easy to revise and have a date of last revision of each page. Without the list of effective pages it is difficult to determine the currency of pages in the manual.

2.3.2

The DC-8 Maintenance and Inspection Program Manual does not list the date of last revision on many pages and on work content cards contained in the manual.

2.3.3

The DC-8 Maintenance and Inspection Program Manual is not current. The current operations specifications pages differ from the operations specifications inserted in the DC-8 Maintenance Inspection Program Manual. The component part numbers listed in DC-8 Maintenance and Inspection Program Manual, pages 5-11-1 through 5-11-18 are not current.

2.3.4

The Systems Component and Control Manual is not listed as a required manual as listed in the General Maintenance Manual. The only mention of this manual is in Part D of the Operations Specifications page 3 of 20, 9 of 20, 11 of 20, 12 of 20, 13 of 20, 14 of 20, and 15 of 20.

2.3.5

The General Maintenance Manual page 12-3-5 authorizes the use of foreign air carrier parts. This is contrary to Section 121.135(a)(4) of the FAR.

Reference EIR #86S0650058

2.3.6

The Boeing 727 Maintenance Manual Table of Contents page 31 list Section 6 - Avionics Component Listing pages 3-6-1 through 3-6-3. The manual does not include these pages.

2.3.7

Revision of the Arrow Air Boeing 727 Maintenance Manual page 5-2-1, 727 "A" check was revised. The revision date was not included on the revised page.

Reference EIR #86S0650026

2.3.8

Arrow Air General Maintenance Manual (GMM) Chapter 5, pages 5-23-1 through 5-23-10 and GMM Chapter 6, pages 6-3-1 through 6-3-8 contain procedures concerning storage of aircraft. Review of these two chapters revealed many differences in terminology, procedures, and conflict between chapters. For Example:
Chapter 5 says short term storage is required for one to fifty-nine days.
Chapter 6 defines short term storage less than ninety days.
Chapter 5 states that no engine preservation is required for short time storage. Chapter 6 states that preservation is required. Chapter 5 states that fuel fungacide is required for short-term storage. Chapter 6 states no fuel fungacide treatment is required.

Reference EIR #86S0650025

2.4 TRAINING PROGRAMS (MAINTENANCE)

Description:

The Arrow's Air Training program is conducted through monthly maintenance meetings, scheduled classroom sessions and on-the-job training. The individual's training is predicated on the person's background and experience, and the person's responsibilities. Specialized training is provided to employees requiring special skills as Avionics Technicians and Inspectors. Classroom training and specialized training requires that a training report form be completed for each training session and retained in the employee's training file. Training received is recorded on Arrow Air MT-1, M-2 and MT-3 forms.

Inspection Data:

Training records were inspected for nine individuals employed by Arrow Air. The training records were reviewed for proper documentation of training received as listed on the indiviudual's master training record utilizing the Arrow Air General Maintenance Manual recording procedures.

Findings:

2.4.1

Seven individual training records were found that had missing documentation for training received as listed on the individual's master training form.

A Mechanic/Inspector given Required Inspection Item (RII) authorization on January 2, 1985, there is no training forms to document the training received.

A Mechanic/Inspector was authorized for maintenance release, Engine Run and Taxi, and RII. This training was received on August 30, 1984 as indicated on Form MT-3, Personnel Training Record, but no MT-1 and MT-2 forms for the training were in the file.

A Mechanic/Inspector was authorized DC-10, DC-8, and Boeing 727 Run-up, Taxi, Inspection Authorization, and RII on May 8, 1985 on Form MT-3, Personnel Training Record. Forms MT-1, Maintenance Training Record and Forms MT-2, Aircraft Taxi and Run-up Check, were not available in training files.

A Mechanic/Inspector was authorized DC-10, DC-8, Boeing 727 and Boeing 707 RII, Taxi and Run-up and Maintenance release on August 24, 1984. Forms MT-1, Maintenance Training Record and Forms MT-2, Aircraft Taxi and Run-up check were not available in training files.

The remainder of the training files reviewed were also missing the MT-1 and MT-2 forms as well as the RII authorization memo which specifies Inspector RII limitations.

2.5 RECORDS SYSTEMS (AIRWORTHINESS)

Description:

The following is a brief description of the records associated with Arrow Air, Inc. airworthiness information. The purpose of this section is to describe the records system and the examination procedures that were followed to test the understanding of that system. More extensive examination of records was accomplished to verify that records indicate compliance with specific airworthiness requirements, such as compliance with Airworthiness Directives. The discussion of these more detailed examinations are provided in separate sections. For example, Airworthiness Directives Compliance is discussed in detail in Section 2.8. These separate sections not only discuss records but also discuss company procedures and processes for meeting FAR requirements.

The airworthiness records of Arrow Air are generally stored in files of several types within the Arrow Maintenance offices, except for a limited number of records maintained by Maintenance Control co-located with Flight Dispatch and certain historical records maintained by International Air Leases. The airworthiness files include: historical maintenance records for each aircraft, a KARDEX system for tracking maintenance required at fixed times, or number of cycles, and an aircraft master log for tracking required inspections. All records are maintained manually.

The following discussion is divided into four parts:

Compliance with Airworthiness Directives
Inspections
Life limited and hard time components
Deferred maintenance

Detailed descriptions of records examinations in each of these areas are found in Sections 2.8, 2.10, 2.9, and 2.10, respectively.

Compliance with Airworthiness Directives

When an aircraft is added to the Arrow Air certificate, a file is established in the Records Department that includes AD status information covering the airframe, engines and equipment. A section of that file is also identified for storage of maintenance information concerning ADs that are accomplished after the aircraft is in operation with Arrow. Also, when an aircraft is acquired by Arrow, a KARDEX file card (Arrow Form M-17) is created to show the status of ADs applicable to the airframe and equipment (but not engines). If certain ADs require repetitive action a separate KARDEX card for each such item (Arrow Form M-18) is created. This KARDEX file is used for maintenance planning.

Records that show AD method of compliance and other details of maintenance action related to ADs may be filed in either of two places: with the aircraft historical files for AD accomplished after the aircraft is in the Arrow system; or with archival files maintained by International Air Leases (IAL) if the AD was accomplished prior to joining the Arrow fleet.

To verify this understanding of the records affecting ADs, the following examination was accomplished:

1. All ADs affecting Boeing 727 and DC-8 aircraft and all ADs affecting JT3D-3B, JT3D-7, JT8D-7 and JT8D-17 were reviewed for applicability to the Arrow fleet.

2. A sample of 10 known applicable ADs were compared with the appropriate AD status sheets described above.

3. A sample of three DC-8 ADs, accomplished by Arrow were examined to verify that maintenance records showing the method of compliance were available in the Arrow file.

4. For one AD affecting a JT3D-7 engine the records maintained by IAL were reviewed to verify the existence of AD compliance information.

This test verified the understanding of the records system. (A more extensive examination of AD compliance records is found in Section 2.8).

Inspection Data:

The maximum time intervals between required inspections for aircraft operated by Arrow Air are set forth in the Arrow Operations Specifications. Limits are defined for A, B, and C checks for all aircraft; for the Basic Check Period (BCP) for the DC-8; and for D checks for the Boeing 727. Arrow Air tracks the inspection requirements and schedules checks using a handwritten master log for each aircraft. This log which is updated daily contains current total times and cycles. It also notes times when each type of check is due and indicates the date and time when each is accomplished.

The master log for one DC-8-62 (N8969U) was reviewed to verify the presence of the above information and to compare the current due times and the times between recorded checks with the Operations Specifications. This check verified the understanding of the inspection tracking records.

Arrow also maintains detailed records of maintenance accomplished during each required check in each aircraft historical record. For the aircraft selected above, the existence of such records for a sample of checks was verified.

As a cross check the log book pages were reviewed for those same checks to verify entries showing accomplishment of the check and completion of the airworthiness release.

This test verified the understanding of the records system. (See Section 2.10 for more details concerning examination of inspection records)

Tracking Hard Time and Life-Limited Components

A KARDEX file card (Arrow Form M-10) is created for each component that has a life limit or must receive some form of maintenunce action at or before reaching a total operating time or number of cycles. Each card is a record of when the last action was accomplished and when the next one is due. Cards filed by aircraft number cover airframe, equipment and engines and follow the ATA-100 index.

For one DC-8-62 (N8968U) and one Boeing 727 (N408BN) the hard time limits shown on these cards for the airframes were agreed to the Operations Specifications. Also, the limitations for the DC-8 engines were agreed to the limits found in the aircraft historical records or the engine status sheet.

This test provided verification of the understanding of the records system. (Additional discussion of these records and their examination can be found in Section 2.8 and Section 2.9)

Deferred Maintenance

Official records related to deferred maintenance are found in the aircraft log book, on a Deferred Maintenance Item (DMI) log (Arrow Form M-8 kept with the aircraft), and on Deferred Maintenance Item sheets (Arrow Form M-8A). There are also reports generated for management tracking of DMIs, a log kept by Maintenance Control indexed by the DMI sequence number, and a report of open DMIs reviewed daily and used for planning maintenance.

Each DMI is associated with a sequence number that appears on the Maintenance Control log, on the DMI sheets and in the aircraft logbook page where the DMI is opened and where it is closed. The DMI sheets are permanetly stored in the aircraft file after the DMI is closed, providing a complete record of: 1) the discrepancy, 2) the deferral process (including any MEL reference) and 3) the maintenance action taken to close the DMI.

A spot check of DMIs for the past 90 days on one aircraft was made to verify the records system. Records were reviewed in the historical DMI file, and the log book pages for completed DMIs. Also, the current list of DMIs was reviewed. A much larger sample of DMI records was reviewed to analyze the Arrow deferred maintenance situation. That effort is discussed in Section 2.9.

A KARDEX file for parts is maintained by aircraft number. Certain information, including parts tags may be attached to these cards to indicate serviceabiliity. Information or parts history is also maintained by Arrow using a file of cards, one for each part number. This information traces the use of parts on Arrow aircraft and for parts previously used by Arrow. Attached to these cards there may also be parts tags and other information concerning the history of the part.

Finding:

2.5.1

Arrow Air Inc., DC-8 Maintenance Manual, page 5-10-1, DC-8 Maintenance check/component change work card index. This index lists job cards applicable to certain job functions. An inspection of the aircraft records section revealed that job card 6509 for power plant removal and installation was not being used - log book page 1795 on N1806, page 04446 on N1806, page 04535 on N1806 and 02562 on N1806 indicate engines were changed but no job cards were on file. On log book page 1795 on N6161A a Japan Airlines (JAL) worksheet was accomplished and signed by a JAL employee. On two occasions the main engine fuel control was changed and job card 6307 for the removal and job card 6309 for the installation should have been used, none of the job cards were on file in aircraft records. Log book page 0531 on N8969U, PC103 form page 81069, shows that pitot static system checks were also accomplished and job cards 6171-1, 6171-2 were not on file. These work cards are part of Arrow Air Inc.'s continuous airworthiness program and should have been properly completed. Review of records revealed that Arrow Air used JAL work cards to perform an engine change at Yokota, Japan on January 12, 1986.

2.5.2

Airworthiness release procedures are not being accomplished per procedures in Arrow Air Inc. GMM (section 7-1-6). Arrow Air has granted personnel at Batch Air Repair Station authority to sign the airworthiness release on their aircraft which is acceptable, but Batch Air Inc. Standards Procedures (SP85-2) states that, "All aircraft that have been in this repair station for a major check (i.e., B, C, or D) or major maintenance will have prior to departure an airworthiness release stamp placed in the log book signed and completed by "person authorized by Batch Air for Airworthiness Releases". These procedures are not being accomplished by Batch Air and no stamp is being placed in log book to show aircraft was returned to service by Batch Air.

The airworthiness releases that are signed by personnel authorized by Arrow Air are not being properly signed off as per GMM page 7-1-6(This page requires legible signatures). In most cases signature blocks are unreadable.

2.5.3

Arrow Air GMM Section 7-1-6 states "that the person signing the maintenance release will fill in the type service performed and the date/time, station and a legible signature." On DC-8, N1806 records reveal that on November 23, 1985, the number four engine was changed by KLM Airlines, with no mechanic sign-off in log book. The same log book page, 04446, also reveals that the stand-by horizon was changed and no mechanic sign-off for the work accomplished. Log book page 02562 on DC-8, N1806 revealed that on June 13, 1985, the number one engine was changed by KLM Airlines. Again, there was no mechanic sign-off of the work accomplished, however, the RII was signed off with an unlegible signature and license number.

2.6 MAINTENANCE FACILITIES

Description:

Arrow Air's maintenance and technical management is located at Miami International Airport. It is listed in their Operations Specifications as the "Principal Operating Base" and consists of general offices, administrative and records section only. Maintenance management, maintenance control, quality assurance and associated clerical personnel are full time employees of Arrow Air and are employed at this base. Arrow Air has maintenance stations using both full and part time personnel at San Juan, Puerto Rico; Philadelphia, Pennsylvania; New York (JFK) New York; Clark AFB, Republic of Philippines; and Diego Garcia. All actual maintenance performance at their principal operating base is accomplished by Batch Air, an FAA approved Repair Station.

Inspection Data:

On site inspections were conducted at all of the stations listed above. The areas covered by these inspections consisted of the following:

General condition of station
Type and condition of Arrow owned equipment
Applicability of tools and equipment
Calibration of tools
Storage, handling and tagging of spare parts
Maintenance manuals and their currency
Company forms and check sheets
Personnel training, documentation and records

Finding:

2.6.1

Three parts with foreign air carrier serviceable tags from an unapproved source were found in the stockroom at San Juan, Puerto Rico. These parts consisted of:

1. Spoiler Indicator - Iberia tag
2. Fuel Temperature Gauge - VIASA tag
3. Hydraulic Temperature Gauge - ALATALIA tag

2.6.2

Section 121.105 of the FAR states that each domestic and flag air carrier must show that competent personnel and adequate facilities and equipment (including spare parts, supplies, and materials) are available at such points along the air carrier's route as are necessary for the proper servicing, maintenance, and preventative maintenance of airplanes and auxiliary equipment. Insufficient parts and tooling to maintain Arrow's aircraft were found at Clark Air Force Base in the Phillipines. A discussion with the FAA inspector and Arrow Air maintenance representative at Clark revealed that when replacement aircraft parts are required and Arrow Air does not have the parts in their stockroom, they borrow the parts from Japan Air Lines. This procedures is contrary to Sections 121.361, 43.5 and 43.7 of the FAR. See finding 2.10.3.

During the inspection it was also determined that inadequate tooling for DC-8 maintenance is available at this station. Arrow Air representative indicated that the #3 engine on a DC-8, N4809E was scheduled to be changed during the week of February 16, 1986. There seems to be some concern by the Arrow representative at Clark AFB as to how the engine change was to e accomplished, since there was no DC-8 engine change equipment at Clark.

2.7 WEIGHT AND BALANCE

Description:

Arrow Air Operations Specifications state that the aircraft will be weighed in accordance with the procedures set forth in Arrow Air's General Maintenance Manual. Manual procedures state that all aircraft will be weighed within a period not to exceed 3 years of the last weighing. The Arrow Air Weight Control System, as published in the Arrow Air General Maintenance Manual, is to provide data so that the accurate weight (Empty Weight or Basic Weight) and Center of Gravity location may be determined on any of its aircraft at any time. Arrow Air Operations Specifications require that all passenger baggage will be weighed and accounted for.

Inspection Data:

Four DC-8 aircraft weight and balance files were inspected to ascertain that Arrow General Maintenance Manual Procedures for Weight and Balance Control were being used. Ramp check performed at Miami Airport to observe baggage loading.

Finding:

2.7.1

It was verified that the Arrow General Maintenance Manual Weight and Balance Control procedures are not being adhered to by Arrow Air. This was verified by inspection of the four DC-8 Weight and Balance files and a statement by Arrow Air management.

In general, Arrow is not using required forms, M-15, M-15B, M-15D to assure up-to-date control of the Weight and Balance. The M-15 Form is a record of the Basic Weight and Balance. Form M-15B is a record of the current aircraft equipment and location. Form M-15D reflects changes to either Weight or Balance of an aircraft.

Reference EIR #86S0650056

2.7.2

Arrow Air Weight and Balance Operations Specifications state that actual weight will be used for passenger baggage. Ramp check performed at Miami International on Arrow Air N8969U on February 5, 1986 revealed that Arrow personnel were not weighing passenger baggage prior to loading aboard the aircraft.

Reference EIR #86S0650055

2.7.3

A review of aircraft records on N8968U, a DC-8-62, revealed that a Bendix Radar System was installed on November 26, 1985, and all galleys (four each) were replaced with a new type on November 19, 1985, which affected the weight and balance of the aircraft. There are no indications that Arrow Air made the weight corrections or updated the Master Weight and Balance file for these installations.

Reference EIR #86S0650056

2.7.4

Arrow Air Operations Specifications, Part E does not conform to accepted practices for the carriage of large groups of passengers where average weights do not conform to the normal standard U. S. weight. Advisory Circular 120.27A discusses an acceptable means for assuring that the aircraft weight and center-of-gravity will remain within acceptable limits,. In part, that acceptable means is that actual passenger weights be used in the case of flights carrying large groups of passengers whose average weight obviously does not conform with the normal standard weight such as athletic squads or other groups which are smaller or larger than the U. S. average.

2.8 AIRWORTHINESS DIRECTIVES (ADs) COMPLIANCE

Description:

When an aircraft or engine becomes part of the Arrow fleet, the status of aircraft and engine AD compliance is furnished to Arrow by the previous owner/operator. Aircraft AD status is entered onto a card in a KARDEX file. This card (Arrow Form M-17) contains an indication of applicability and whether the AD was previously complied with. The card usually does not indicate the method of compliance.

Engine AD status is reported on an engine status sheet which is filed with the aircraft records. It also indicates AD applicability, and if the AD had been previously complied with, but the ADs method of compliance is generally not found on this sheet.

For aircraft and engine repetitive ADs, Arrow creates a card for the aircraft KARDEX file (Arrow Form M-18) which shows accomplishment and due times (or cycles) for the AD.

Backup maintenance records for aircraft and engine AD compliance are maintained by International Air Leases, Inc. (IAL).

Once aircraft and engines are in the Arrow fleet, AD compliance is in accordance with the following process. The Director of Quality Control (and an IAL staff member for engines) reviews new ADs and determines the applicability to Arrow. If an AD is applicable, copies are sent to Production Control (maintenance planning) and to the Records Department for entry on the AD status record. For aircraft this record is the M-17, for engines the status sheet, and the M-18, if the AD is repetitive. Production control schedules the required maintenance per the AD requirements. Special "red-bordered" maintenance forms are issued to maintenance by planning.

After accomplishment of an AD by Arrow the completed "red-bordered" form and other related maintenance records are returned to the Records Department and filed with the aircraft historical records. This information normally contains the method of compliance.

Inspection Data:

Records were examined in each of three categories: 1) compliance with an AD that was accomplished prior to operation of the aircraft or engine by Arrow; 2) compliance with ADs while the aircraft or engine was on the Arrow certificate; and 3) repetitive ADs affecting Arrow aircraft and engines.

Based upon a review of ADs affecting DC-8 and Boeing 727 type aircraft and JT3D and JT8D type engines, a list of ADs applicable to Arrow aircraft and engines was compiled. In a small number of cases where the AD only affected certain aircraft part numbers the applicability to Arrow aircraft was not independently verified; however, the existence of Arrow records showing applicability were reviewed. All engine AD applicability was independently verified.

For aircraft ADs, the Arrow KARDEX file was examined for five different aircraft and the list of applicable ADs compared to the list compiled from a review of the actual ADs. For engine ADs the status shown in the aircraft files was examined for all engines on three aircraft. This status was compared to the list compiled from a review of the actual ADs.

The KARDEX file cards (Forms M-18) were examined for all repetitive ADs (aircraft and engines) for three aircraft.

To further verify the accomplishment of ADs, records were reviewed in two areas. First, historical records maintained by IAL were examined for one aircraft and for three engines to verify existence of AD compliance information. Second, the Arrow records for three aircraft were reviewed to verify the existence of information concerning ADs accomplished by Arrow, and the presence of information showing the method of compliance.

For repetitive ADs, a spot check of three required inspections was accomplished using the Arrow historical records. The records indicated completion of the AD requirements.

Finding:

2.8.1

Arrow Air record keeping practices are not always consistent with Arrow General Maintenance Manual (GMM).

1) Records that show the method of compliance with ADs for those ADs accomplished prior to the aircraft or engine becoming part of the Arrow fleet are maintained by International Air Leases, Inc., not Arrow Air, Inc. The Arrow GMM states, in part that "Arrow Air will retain .... records in accordance with the requirements of Section 121.380(b) and 91.173(b) of the FAR". It further specifies that such records include "Records of applicable Airworthiness Directive status including the method of compliance for all aircraft, power plants, and appliances." (Ref: GMM p. 4-5-1, Revision 22)

2) AD Note Summary Forms (Arrow Form M-17) are not maintained for engines. The Arrow GMM states that a Form M-17 will be used to show AD status of aircraft and engine ADs. (Ref: GMM, p. 7-17-1, Revision 26)

3) The method of compliance with an AD is generally not shown on the Form M-17. The Arrow GMM indicates that the method of compliance is to be inserted on the Form M-17 in the "compliance" section of the form. (Ref: GMM, p. 7-17-1, Revision 26)

The AD compliance method for repetitive engine ADs is shown on Arrow Form M-18 and in some cases, on the engine status sheet found with the aircraft historical records.

2.8.2

Arrow Air describes AD handling and recording procedures in the General Maintenance Manual (GMM), Section 4-5-1, paragraph (6), "Records of applicable AD status including the method of compliance for all aircraft, powerplants and appliances." The operator does not always comply with the recording requirements of the manual. Arrow Air AD records were erroneous, in that they omitted the method and date of compliance on seven engine records reviewed as follows:

PPSNG - Boeing 727-200

#1 Engine - Serial Number 688222
#2 Engine - Serial Number 688350
#3 Engine - Serial Number 688308

N8973U - DC-8-62

#1 Engine - Serial Number 671327

N6161A - DC-8-63F

#4 Engine - Serial Number 671239

N4809E - DC-8-55F

#1 Engine - Serial Number 632751
#3 Engine - Serial Number 645059

Reference EIR #86S0650057

2.9 MAINTENANCE AND RELIABILITY PROGRAMS

Description:

Arrow Air has a continuous airworthiness and inspection program only. There are no current provisions for a reliability program. The DC-8 maintenance program is primarily "on condition" items that are maintained in a continuous airworthy condition by periodic inspections, checks and services in conjunction with a structural inspection program. The Boeing 727 is maintained essentially by use of a similar program, but has a number of time controlled components and one candidate aircraft (N408BN) of the Boeing 727 Supplemental Structural Inspection Program. The current checks and times are as follows:

DC-8

Transit Check (TC)	*
A Check	150 hours
B Check	400 hours or 6 months
C Check	3000 hours or 36 months
BCP	25,000 hours

B-727

Transit Check	*
A Check	150 hours
B Check	450 hours or 6 months
C Check	3125 hours or 36 months
D Check	25,000 hours

*Transit check will be performed prior to the first flight of the day originating at a principal operating base. In the event the aircraft is involved in extended flights prior to return to a principal operating base, the engineer's preflight shall be accomplished in lieu of a transit check.

Arrow Air engines and powerplants are maintained in an on condition status based on the Arrow Air Engine Surveillance Program (ESP-100). The program is divided into three major sections, Section A covering the monitoring analysis program, Section B covering the scheduled engine maintenance inspections, and Section C covering the specialized unit repair system.

Inspection Data:

Reviewed check sheets and work cards for both DC-8 and Boeing 727 Maintenance Programs. Compared required maintenance tasks for A and B checks as shown in operations specifications with actual work call out on the check sheets. Performed a spot check of C check work cards for content and comparison of maintenance tasks against operations specifications C check requirements. Reviewed handling and flow of engine performance monitoring data of aircraft engines in flight.

Finding:

2.9.1

Comparison of operations specifications task requirements against DC-8, A and B checksheets showed the following deficiencies:

Five (5) A check items are not covered
Fourteen (14) B check items are not covered

Comparison of operations specifications task requirements against Boeing 727, A and B check sheets showed the following deficiencies:

Thirteen (13) A check items are not covered
Eleven (11) B check items are not covered

2.9.2

Arrow Air does not perform its own engine monitoring analysis. Arrow Air has an agreement that provides for Batch Air, Inc. to perform all maintenance inspection and performance monitoring in accordance with manufacturers procedures and Arrow Air ESP-100 program. The Arrow Air ESP-100 Engine Surveillance Program is a generalized program and does mention either the JT-3D or the JT-8D engine by name or designation number.

2.9.3

Arrow Air, Inc. operated a Boeing 727-200 series aircraft from June 13, 1985 to January 31, 1986 under authorization VASP Air maintenance program. VASP Air is a foreign air carrier located in Sao Paulo, Brazil. Review of the maintenance program revealed that this program was a condition monitoring program. Condition Monitoring (CM) is a maintenance process for items that have neither "hard time" nor "on condition" maintenance as their primary maintenance process. Condition Monitoring is accomplished by appropriate means by the operator for finding and solving problem areas. The operator must apply knowledge in analysis of failures or other indication of deteriorations to consider corrective action or improve performance. Arrow Air contractual agreement with VASP Air did not contain any method of who was controlling the Condition Monitoring program or who was accomplishing data analysis. Discussion with the vice President of Maintenance revealed that Arrow Air had no control or feedback on components that were replaced on this aircraft. Review of Arrow Air maintenance manuals did not contain procedures or data analysis methods for the Condition Monitoring program.

2.10 MAINTENANCE INSPECTION SYSTEM

Description of System for Tracking Routine Inspection

The Operations Specifications of Arrow Air specifies maximum time intervals for four levels of inspection. These limits are:

MAXIMUM TIMES BETWEEN CHECKS

Aircraft	A Check	B Check	C Check	BCP (DC-8) D Checks(B-727)
DC-8	150 hrs	6 mos or 400 hrs	36 mos or 3000 hrs	25,000 hrs
B-727	150 hrs	6 mos or 450 hrs	36 mos or 3125 hrs	25,000 hrs

The Arrow system for tracking and scheduling routine inspections is based upon a master log maintained for each aircraft. These master logs which are updated daily provide total aircraft times and cycles. They also show at what time inspections are due and when inspections were accomplished.

The information contained in the master logs are reviewed approximately twice each week by the Records Department and the information is used by this department to alert the Maintenance Planning Department. This information along with other maintenance requirements are used to schedule all routine inspections.

Inspection Data:

The routine inspection records were examined for four (4) aircraft, N8973U, N8969U, N408BN and PP-SNG. The following steps were followed for each aircraft.

(1) The master log was reviewed and times noted for all C, D or Basic Check Period (BCP) checks accomplished and due. Times for the last two B checks and the next due time for a B check were noted (if there were that many since the aircraft became part of the Arrow fleet). Times for the last 10 A checks and the next due times were noted for all except N408BN for which only 6 A checks have been accomplished by Arrow.

(2) Time intervals between accomplished checks, and between the current due times and the current aircraft total time were computed and compared to the limits described above.

(3) For all A, B, and C checks (no BCP or D checks were accomplished by Arrow), records in two areas were cross checked. First, the historical maintenance files were examined to verify the existence of a check "package" signed by a mechanic showing completion of the check. Second, the aircraft log book page for the date of the inspection was reviewed to verify that there was a notation of the accomplished check and a signed airworthiness release.

MAINTENANCE INSPECTION SYSTEM

System Description

The hard time maintenance requirements for Arrow aircraft and equipment (not including engines) are defined in the Arrow Operations Specifications. According to the operations specifications, engine requirements of this type are determined by the Engine Surveillance Program (ESP-100).

A KARDEX file is used to track all aircraft, equipment and engine hard time maintenance and inspection requirements. Cards are filed by ATA-100 Index numbers. The cards are maintained by the Records Section and regular review of these records is used to alert the Production Control (maintenance planning) department of upcoming requirements. The KARDEX file cards show information about completed actions as well as due times (or cycles).

Hour and cycle limits for engines, included in the KARDEX file are based upon the engine status reports received by Arrow at the time an engine becomes part of the Arrow operation. These status sheets are filed with the aircraft historical record. In most cases there are first and second limits for engine parts. Arrow tracks only the first limit and schedules maintenance to conform to those limits.

Component control cards are used by Arrow Air to track parts installed on aircraft.

Inspection Data:

A sample of one Boeing 727 (N408BN) and two DC-8-62s (N1803 and N8973U) were selected and the KARDEX cards for those aircraft examined to verify that: 1) all hard time items were being tracked, and 2) the recorded time or cycle limits agreed with the limits stated in the Arrow Operations Specifications, the engine status sheet, or the manufacturer's specification, as appropriate. For the Boeing 727, this examination covered 34 items for the aircraft and equipment and 3 items for each engine. For the DC-8s, there were 9 items for the aircraft and equipment and 3 items for each engine that were checked.

A spot check of recently completed maintenance required by hard time limits was accomplished by reviewing the historical aircraft maintenance records to verify existence of records showing completion of such work. Also a spot check of an item requiring action within the next 90 days was made to verify that maintenance planning had been notified of the requirement per the Arrow procedures.

An in-depth inspection was accomplished on Arrow Air component control system.

Findings:

2.10.1

Aircraft and engine hard time limits were generally tracked through the KARDEX system and scheduled for completion within the limits required. One item was found that was not being tracked.

The Pratt and Whitney overhaul manual for the JT3D-7 engine requires an inspection of the front compressor hub between 9,000 and 11,000 cycles. The Arrow KARDEX system does not track this requirement. Also, the historical engine records maintained by International Air Leases (IAL) do not include any reference to this cycle limit. A sample of 10 engines was selected and the recorded number of cycles were compared to the above limits. None of these exceeded the limit.

2.10.2

The master logs of all four aircraft examined indicated that all levels of inspections accomplished by Arrow were within the limit specified in the operations specifications. The records showing accomplishment of checks and the related aircraft log book entry have the following exceptions:

(1) Aircraft 8973U - a) The master log shows completion of an A check on November 22, 1985, the log book has no entry on that date, but shows completion of an A check on November 17, 1985. No paperwork could be found in the file for an A check in that time frame. b) The master log shows completion of an A check on November 3, 1985. The nearest log book entry is found on October 30, 1985. No A check "package" could be found in the historical file.

(2) Aircraft 8969U - The master log shows completion of an A check on October 12, 1985. The aircraft log book shows a A check in Philadelphia on October 12, 1985. The historical records contain a check "package" for an A check on October 12, 1985 in Philadelphia and also contains an A check "package" on October 12, 1985 for this same aircraft in San Juan. The aircraft log indicates that the aircraft was not in San Juan for several days prior to and after October 12, 1985.

2.10.3

Arrow Air has on numerous occasions installed aircraft parts and components obtained from foreign air carriers which were not maintained by persons authorized by Section 43.3 of the FAR or approved for return to service by persons authorized by Section 43.7 of the FAR. The company has no operations specifications permitting deviation from these requirements as provided for in Section 121.361(b) of the FAR.

Reference EIR #8630650058

2.11 CONTINUOUS ANALYSIS AND SURVEILLANCE PROGRAM

Description:

Arrow Air General Maintenance Manual describes numerous forms to be used to comply with the surveillance requirements of Section 121.373(a) of the FAR. Arrow also has a separate Aircraft and Engine Surveillance program.

Inspection Data:

Arrow "Chronic Items" forms, which are due accomplishment at all "A" and "B" checks were reviewed.

Arrow Station Inspection forms and Fueling Station Inspection forms and procedures were reviewed.

Aircraft and Engine Surveillance programs were reviewed.

Findings:

2.11.1

Requirements of Section 121.373(a) of the FAR requires that the certificate holder establish and maintain a system for the continuing analysis and surveillance of the performance and effectiveness of its inspection program and the program covering other maintenance, preventive maintenance, and alterations and for the correction of any deficiency in those programs, regardless of whether those programs are carried out by the certificate holder or by another person. A review of the Arrow General Maintenance Manual does not ascertain a system for the continuing analysis of the performance and effectiveness of its programs, or a system for the correction of any deficiency in those programs.

Some of the findings were discussed with Arrow Air management. During that discussion, it was determined that Arrow had not established and maintained a system that complies adequately with Section 121.373(a) of the FAR. Although Arrow has a data gathering system, nothing is published to describe the analysis or corrective action procedures.

2.12 FUELING AND SERVICING

Description:

The Arrow Air General Maintenance Manual (GMM) fueling and servicing section addresses safety precautions to be followed during aircraft fueling operations. Instructions covering commingling of fuel and safety precautions to be followed. Instructions to prevent smoking during refueling operations are addressed as well as instructions for aircraft bonding and fire extinguisher availability,. Aicraft defueling procedure prohibits defueling indoors and addresses precautions to be taken in the event defueling is accomplished during rain or snow and fueling operations are not allowed during severe electrical storms. Fuel spillage procedures are addressed and require that the airport fire department be called immediately and all activity around the aircraft stopped. Winter operations for fueling operations are addressed and cautions about frozen fuel sumps. Engine oil servicing is addressed and cautions against using contaminated oil, mixing oils and using only approved oils. Hydraulic fluid servicing of both MIL-5606 and Skydrol Systems is addressed and cautions that extreme care must be used to make sure that the proper fluid is used in the system. Arrow Air has a fuel quality control system which requires that primary vendors be audited every 18-24 months and has written instructions and specific forms for that audit. Aircraft de-icing procedures and instructons are contained in Arrow Air's GMM.

Inspection Data:

Fuel audit forms were reviewed to determine that audits were accomplished in accordance with Arrow procedures and that discrepancies noted during those inspections were corrected. Aircraft servicing was observed at the Batch Air maintenance facility and Miami International Airport to determine adherance to company (GMM) servicing and safety procedures. Arrow's General Maintenance Manual procedures were reviewed referencing cold weather operations and de-icing aircraft.

Findings:

2.12.1

No reference to re-fueling procedures to assure protection of passengers on board the aircraft during refueling operations as required by Section 121.135(b)(18) of the FAR.

2.12.2

Cold weather operation, ice removal procedures, on page 5-8-4 of the GMM is contrary to Section 121.629(b) of the FAR. The GMM states that one-eighth of an inch of frost is allowed on the lower wing surface.

2.13 DEFERRED MAINTENANCE

Description:

When Arrow maintenance defers an item, a call is placed to Maintenance Control in Miami to obtain a sequential Deferred Maintenance Item (DMI) Number. This number along with an MEL reference, if appropriate, is entered into the log book page. The DMI is also entered onto a DMI log kept in the aircraft (Arrow Form M-8).

Maintenance Control, after assigning a DMI number also fills out the top portion of a DMI Form (Arrow Form M8-A) which provides information about the deferral. This partially completed form is filed by aircraft number in Maintenance Control. A copy is sent to Production Control (maintenance planning) where it is entered into the computer for printout along with planned maintenance action.

When a DMI is closed, Maintenance Control completes the Form M8-A showing corrective action, aircraft log book page number and date. The completed forms are sent to the Records Department where they are permanently stored as part of the aircraft historical maintenance file.

Maintenance Control also maintains a DMI status book, a log by DMI number showing when DMIs were opened, when they were closed, and, in some cases, a description of the action taken to close the DMI.

The open DMIs based upon the partially completed Forms M8-A (and the computer printout which is generated from these forms) are reviewed daily by Maintenance. The open DMIs are used by the planning department to schedule action on DMIs along with other required maintenance.

Inspection Data

(1) An example of DMI status for the Arrow fleet was examined by selecting a recent DMI listing which was effective January 30, 1986 and reviewing the open DMI.

(2) Two aircraft were selected for detailed examination of DMIs. One of these, PP-SNG, was the only Boeing 727 on the Arrow certificate at the time of the examination. The other, a DC-8 (N8973U) was selected at random from the fleet of 10 DC-8s.

All DMI historical records (completed DMIs) were examined for each aircraft for the period July 1, 1985 to December 31, 1985. Each DMI (Form M8-A) was checked for the existence of signatures, DMI descriptions, corrective actions and dates.

A list of opening and closing information for each DMI was compiled. This list was compared to the corresponding information shown on the aircraft log book page that should cite the DMI.

Discrepancies between information on the DMI form and the log book pages were noted. Records were also checked for missing entries, required by the procedures of the Arrow General Maintenance Manual, that should appear on the DMI Form or the log book page.

The following table summarizes the results of open DMIs as of January 31, 1986 of the information contained in Arrow Air DMI files.

Aircraft	No. of Open DMIs	No. Over 30 days	Percent over 30 days
N904	13	8	62%
N6161A	19	2	11%
N1803	5	1	20%
N8974U	4	1	25%
N8968U	1	1	100%
N8973U	8	2	25%
N409	2	1	50%
N408	8	1	13%
N941	3	0	0%
PP-SNG	1	0	0%
TOTAL	64	17	
AVG	6.4	1.7	27%

The DMI records for the six month time period examined indicate the following:

For N8973U

- 86% of the DMIs were cleared within 10 days
- 1% of the DMIs were carried more than 30 days
- One DMI was carried 46 days

For PP-SNG

- 61% of the DMIs were cleared within 10 days
- 10% of the DMIs were carried more than 30 days
- One DMI was carried 82 days

Finding:

2.13.1

In certain cases, records showing DMI information are incomplete. Missing entries either on log book pages or on the DMI Form (Form M8-A) were found for 10 DMIs affecting N8973U (out of 70 reviewed), and for 14 DMIs affecting PP-SNG (out of 71 reviewed).

EXHIBIT NO. 6

PRELIMINARY RESPONSE OF ARROW AIR
TO "SPECIAL INSPECTION REPORT"
ISSUED BY
THE U.S. FEDERAL AVIATION ADMINISTRATION

PERMANENT SUBCOMMITTEE ON INVESTIGATIONS
HEARING ON AIRLINE SAFETY

MARCH 6, 1986

Ever since the tragic crash at Gander, all of us at Arrow Air have been working diligently in an all-out effort to determine how such an incident could occur. As part of this process, and at the direction of the Federal Aviation Administration, an inspection of Arrow Air was commenced on January 21, 1986. The inspection was conducted over a period of nearly four weeks by a twenty-two person FAA team.

At the conclusion of the inspection, the inspection team provided an oral briefing on February 26, 1986, to Arrow management. At the oral briefing, recorded at that time, FAA team members characterized Arrow management as "very adequate"; they characterized our manuals as being a product of "good work"; they characterized our dispatch and release section as "very impressive"; they indicated several areas in which they found "no problems."

Indeed, at the conclusion of the oral briefing, the manager of FAA's Flight Standards for the Southern Region stated that the FAA inspection team did not find any deficiencies of a sufficient nature to conclude that Arrow was an unsafe airline.

Arrow Air cooperated fully with the FAA during their inspection, and we will continue to do so. However, upon our review of the published report, received only yesterday afternoon, we were distressed to observe an entirely different perspective than that which had been conveyed to us at the oral briefing. Furthermore, the written report is dated February 21, five days prior to the date of the oral briefing, at which time the FAA told us no written report yet existed.

After four weeks of a thorough and exhaustive inspection and publication of the forty-four page written report delivered to Arrow yesterday, the FAA report reaches no conclusion regarding the air-worthiness of Arrow Air. Unfortunately, contrary to the conclusion conveyed in the oral briefing with regard to our fitness as an air carrier, the written report inferentially presents a number of claims which in many cases are misleading, and in some cases, are factually inaccurate.

Therefore, Arrow believes it must submit this statement because the written report provides the unfounded basis for the conclusion to be drawn by a public unfamiliar with airline industry practices that Arrow is an unsafe airline.

We are particularly concerned that in the entire forty-four page report, the FAA fails to differentiate between allegations of serious deficiencies and allegations of insignificant deficiencies relating to air safety.

Almost all of the alleged deficiencies cited in the FAA report are not related to the safe operation of Arrow aircraft, and in fact, many of them are extremely minor in nature. Not only are they minor in nature, most are very misleading to a person not familiar with airline operations and maintenance.

Perhaps the most significant deficiency alleged by the FAA can be found in Finding 2.8.2, which states, "Arrow Air [Air-worthiness Directives] records were erroneous, in that they omitted the method and date of compliance on seven engine records. . ." This finding is erroneous. Within forty-eight hours after being informed of this finding at the oral briefing on February 26, Arrow produced all of the records for eight of the nine engines cited in Finding 2.8.2 (one engine was on an aircraft leased to a third party and its records were not immediately available). All such records were complete as produced; the FAA inspection team failed to obtain these readily available documents from Arrow sources during its inspection. We have attached to this statement a copy of a February 28, 1986, letter from the FAA Principal Maintenance Inspector in Miami verifying this fact.

Another example of defects in the report is represented by the criticisms contained in Finding 2.4.1 which relate to Arrow Maintenance Training Records. These allegations could have been addressed by documents which were available to the FAA inspection team in Arrow Air training files, thus totally rebutting this Finding.

Most disconcerting is the strong inference running throughout the written report that the deficiencies contained therein have an adverse affect on Arrow's ability to provide adequate air safety. Throughout the report the FAA makes no effort to differentiate between those deficiencies related to air safety, on one hand, and those deficiencies which have no impact whatsoever on air safety on the other.

The following two examples illustrate this discrepancy in the FAA report:

1) Finding 1.2.1 states that "Diego Garcia is not listed in Arrow's Operations Specifications. Arrow operates military contract flights into Diego Garcia. Since Section 121.45 of the FAR requires areas of operations to be listed and since Arrow is operating into the unlisted Diego Garcia Area, it appears that Arrow is operating contrary to their Operations Specifications and Section 121.3 of the FAR." This so-called deficiency ignores the fact that all the geographic areas surrounding the Indian Ocean, where Diego Garcia is located, are included in Arrow's Operations Specifications, (attached to this statement) specifically, the "Atlantic Area, Europe, Africa, . . . Pacific Area, [and] Asia. . . ."

   This language clearly was intended to authorize world-wide travel, including the servicing of Diego Garcia in the Indian Ocean. The FAA Finding ignores the fact that many other U.S. air carriers have been operating to points in the Indian Ocean for years with operations specifications identical to Arrow's.

2) Section 2.13, Deferred Maintenance, lists sixty-four open DMIs [Deferred Maintenance Items]. Arrow can verify, without question, that the correct calculation should not have been sixty-

four, but rather forty-five. More importantly, not a single existing open DMI identified in Section 2.13 is of a sufficient nature that would put an Arrow aircraft in a non-flying status pursuant to FAA standards.

One example of the nature of the open DMIs listed in this Section is an inoperable oven that Arrow did not have repaired until it was permanently removed from the aircraft because that aircraft did not serve hot meals.

Arrow has every reason to believe that its record of open DMIs compares favorably with any airline in the country.

Arrow will provide the Subcommittee, the FAA or any interested party a detailed analysis of each of the items contained in the FAA report.

Arrow sincerely believes the conclusion of the FAA on-the-scene team conveyed to us at the oral briefing on February 26, 1986, that Arrow was operating a safe airline. In all fairness, the public is entitled to a written conclusion from the FAA, as conveyed by them in the oral briefing, that nothing was found in their inspection to indicate that Arrow is an unsafe airline.

February 28, 1986

Mr. E. M. Strehse
Vice President of Maintenance
Arrow Air, Inc.
7955 NW 12th Street
Miami, Florida 33126

Dear Mr. Strehse:

I have reviewed the following records and have found these records to meet the requirements of FAR 121.380. (2)(v) & (a)(1)

	SIGNATURE	DATE
1. JT3 Engine Serial Number 671327		2/25/86
2. JT3 Engine Serial Number 671239		2/23/86
3. JT3 Engine Serial Number 632751		2/25/86
4. JT3 Engine Serial Number 645059		2/23/86
5. JT8 Engine Serial Number 688222		2/25/86
6. JT8 Engine Serial Number 688350		2/21/86
7. JT8 Engine Serial Number 688308		2/21/86
8. Galley Equipment Alteration, A/C N-8968U (Completed 11/19/85)		2/25/86
9. Engine Change A/C N-1806 Accomplished Nov. 27, 1985		

Sincerely,

U.S. Department of Transportation
Federal Aviation Administration

Operations Specifications
En Route Authorizations/Limitations/Procedures

Form Approved
OMB No 2120-0028

Route and Area of Operations Authorization	Via	Type of Aircraft Authorized					Special Notes	Type Navigation
		B-727		DC-8				
1. 48 contiguous states of the U.S., and the District of Columbia, and the State of Alaska.	In accordance with Part B of these Operations Specs.	·X		X				
2. The following areas outside of the U.S., excluding any communist block countries are authorized: North, Central and South America, Caribbean Area and Bahama Islands, Atlantic Area, Europe, Africa and United Kingdom, Pacific Area, Asia, Japan, Australia and all the Islands in the Pacific including the State of Hawaii and the Philippine Islands.	Via all established international routes and off-shore control area.	X		X			NOTE 1 NOTE 2 NOTE 3	

Special Notes:

1. In addition to complying with FAR 121.349, dual operating Omega/INS Navigation System operable from both pilot stations, is required for dispatch or these routes or route segments as specified in FAR 121.389 (a) (1) or (2). Both pilots will be Omega/INS qualified in accordance with the approved training program except that when navigation is being performed under the supervision of an Omega/INS Qualified Check Airman, the pilot(s) performing such supervised navigation need only have completed the approved Omega/INS Ground Training.

2. At least one (1) Omega/INS is required when dispatching on routes between East Coast Off Shore Control Areas and destinations in the Caribbean. In addition, operation in North Atlantic approved routes available for aircraft fitted with short range navigation equipment plus one long range navigation system (Blue Spruce route only!).

3. Operations into Beirut International, Lebanon and Tripoli, Libya are PROHIBITED.

Page Control Date JAN 17 1986

Part F Page 6

FAA Form 8400-1 (2-84)

EXHIBIT NO. 7

The following is a list of the 43 airlines that received NATI Phase II in-depth inspections excerpted from the National Air Transportation Inspection Program, Federal Aviation Administration, March 4, 1984 - June 5, 1984, Report for the Secretary. The remainder of the Report is contained in the Subcommittee's files.

NATIONAL AIR TRANSPORTATION INSPECTION PROGRAM

FEDERAL AVIATION ADMINISTRATION

March 4, 1984 - June 5, 1984

Report For The Secretary

AIR CARRIERS RECEIVING INDEPTH INSPECTIONS

- Air Carriers Conducting Operations Under FAR Part 121 Rules:

Air Florida
Air National Sales and Service
Air Resorts
Alaska Airlines
American International Airways
American Trans Air
Arista International Airlines
Arrow Airlines
Cam Air International
Emerald Air
Evergreen International
Flying Tiger Line
Key Airlines
Markair
Midway Airlines
Northeastern Airlines
People Express Airlines
Rich International Airlines
Rosenbaum Aviation
United Air Carriers (OHA)

- Air Carriers Conducting Operations Under Both FAR Part 121 Rules and FAR Part 135 Commuter Rules:

Air Pac
Combs Freightair
New Aire
Pilgrim Airlines
Rio Airways
South Pacific Island Airways
Wright Airlines

- Air Carriers Conducting Operations Under FAR Part 135 Rules:

Air.North
American Central Airlines
Arctic Circle Air
Clinton Aero
Ford Aire
Harolds Air Service
Precision Airlines
Resort Airlines
San Juan Airlines
Scheduled Skyways
Skywest Airlines
Slocum Air
Spirit Airways
Sunbelt Airlines
Wheeler Flying Service
Wills Air

EXHIBIT NO. 9

National Transportation Safety Board

PRELIMINARY REPORT OF AVIATION

☐ Accident ☒ Incident

ICAO NOT REQUIRED

M I A 8 3 1 A 0 2 7

NTSB Accident/Incident No.

1 AIRCRAFT Registration(N)Number: N707CR Make(Manufacturer): Boeing Model Number: 707-300

2 LOCATION City State Zip: Enroute between Miami, FL and Puerto Plata, Dominican Republic Airport Identifier ☐

3 DATE AND TIME Date: NOV 11, 82 Flight Number: APA/707 Time(local): 1030 e.s.t. Zone

4 NUMBER OF INJURIES 1 Fatal ___ Serious ___ Minor 3 None ___ Unknown

5 AIRCRAFT DAMAGE ☐ Destroyed ☐ Substantial ☐ Minor ☒ None ☐ Unknown

6 FIRE ☒ None ☐ In flight ☐ On Ground ☐ Unknown

7 ITINERARY Last Departure Point ☐ Ident and City State: Miami, FL Time 0912 — Destination ☐ Ident and City State: Puerto Plata, Dominican Rep

8 OPERATOR Name: d/b Arrow Air, Inc. Address: P. O. Box 522230 GAF
Miami, FL 33152

9 DAMAGE TO PROPERTY ☒ None ☐ Residential Area ☐ Vehicle ☐ Trees ☐ Wires/Poles ☐ Residence ☐ Commercial Bldg ☐ Airport Facility ☐ Crops ☐ Other

10 FLIGHT PLAN ☐ None ☐ VFR ☒ IFR ☐ Unknown

11 WEATHER DATA At Accident ☒ Site ☐ Other Area Ident ___ | ☒ VMC ☐ IMC | ☐ Precipitation ☒ No Precipitation | Ceiling ___ Ft. ☐ BKN ☐ -X ☒ Unk ☐ OVC ☐ X | ___ SM Visibility ___ °F Temp UNK ___ Winds ___ Kts

12 TYPE OF OPERATING CERTIFICATE

Air Carrier Operating Certificate
☒ Domestic/Flag Air Carrier
☐ Supplemental Air Carrier
☐ All Cargo Air Service Air Carrier (Section 418)

Air Taxi Operator
☐ Commuter Air Carrier
☐ On Demand Air Taxi

Operating Certificate
☐ Commercial Operator
☐ Air Travel Club
☐ Corporate (14 CFR 125)
☐ Other

Neither Certificate (General Aviation)
Personal Use/Business Transportation ☐ Personal ☐ Business ☐ Unk
☐ Executive/Corporate Transportation
☐ Instructional
☐ Aerial Application
☐ Aerial Observation
☐ Other Work Use
☐ Other
☐ Foreign Registered Aircraft ☐ Public

13 TYPE OF OPERATION ☒ Scheduled ☐ Non Scheduled | ☐ Domestic ☒ International | ☐ Passenger ☒ Cargo ☐ Passenger + Cargo ☐ Mail Contract Only ☐ Training ☐ Ferry ☐ Other

14 FLIGHT CONDUCTED UNDER ☐ 14 CFR 91 ☒ 14 CFR 121 ☐ 14 CFR 127 ☐ 14 CFR 135 ☐ 14 CFR 137 ☐ 14 CFR 91D ☐ 14 CFR 125 ☐ 14 CFR 133 ☐ 14 CFR 123 ☐ Other

15 PHASE OF OPERATION ☐ Static ☐ Taxi ☐ Takeoff ☐ Climb ☒ Cruise ☐ Descent ☐ Approach ☐ Landing ☐ Maneuvering ☐ Hover ☐ Other ☐ Undetermined

16 TYPE OF ACCIDENT

During an In flight Phase of Operation Collided With
☐ Ground/Water/Obstacle

During an On Ground Phase of Operation Collided With
☐ Obstacle

Personal Injury
☐ On Ground
☒ In flight

Aircraft Damage
☐ On Ground
☐ In flight

☐ Undetermined
☐ Missing Aircraft
☐ Other

PRELIMINARY INFORMATION – Subject to change; Pertinence to Accident/Incident not positively established at this time.

NTSB Form 6120.19a
(Rev. 1/80)

BEST COPY AVAILABLE

NARRATIVE STATEMENT OF PERTINENT FACTS, CONDITIONS AND CIRCUMSTANCES RELATING TO THE INCIDENT OCCURRING ON BOEING 707, N707CB, ON NOVEMBER 11, 1982 WHILE ENROUTE BETWEEN MIAMI, FL AND SANTO DOMINGO, DOMINICAN REPUBLIC

On November 11, 1982, at approximately 1030 hours, the trainee flight engineer became incapacitated aboard Arrow Airways cargo flight APA707, a Boeing 707 model, N707CB, while enroute from Miami, FL to Santo Domingo, Dominican Republic. The aircraft was on an IFR flight plan in level cruise flight at 33,000 feet in visual meteorological conditions at the time of the occurrence. The captain declared an emergency and executed an emergency descent to 6,000 feet while the flight engineer ministered to the victim. An amublance met the flight at the destination and transported the victim to the hospital where he expired later in the day.

The flight experienced a pressurization problem during the climb after departing Miami at 0912. The captain continued the climb to the cruise altitude after the 4 occupants had donned their oxygen masks. The cabin altitude stabilized at about 20,000 feet while in cruise flight. When the victim slumped in the jump seat, the flight engineer traded masks with him and verified normal operation of the victim's oxygen supply system. The pressurization problem was reportedly related to a stuck outflow valve.

All cockpit crewmember oxygen is obtained from the same supply source in the aircraft. Test of the victim's oxygen regulator at a certificated repair station showed normal operation and all tests were within specifications except as noted below:

a. The suction test was about 0.1 inch out of tolerance on the low side. The net effect of this would be that an individual using the regulator would have to provide slightly more suction than normally required to receive a given volume of oxygen from the regulator. Repair facility personnel related that many regulators received for overhaul show the suction test to be further out of the specified limitations than that found for this occurrence.

b. The regulator delivers 100 percent oxygen at cockpit altitudes above 32,000 feet. The oxygen ratio test for cabin altitudes below 32,000 feet was slightly rich at low flow demands. At higher flow demands that are more closely related to an individual's breathing requirements, the oxygen ratio test was within the test specifications.

The victim was transferred to New York, NY where an autopsy was reportedly performed. The results of the autopsy have not been received and it has not been determined whether the death was related to or associated with the operation of the aircraft.

[redacted]

BEST COPY AVAILABLE

QUALITY CONTROL CHECK

FYI Insp

U.S. Department
of Transportation
Federal Aviation
Administration

EXHIBIT NO. 10

Memorandum

South Florida FSDO - Miami Office
Post Office Box 592015
Miami, Florida 33159

Subject: **INFORMATION:** Responsibility for Acceptance of Overhaul Records

Date: December 3, 1985

From: Acting Manager

Reply to Attn. of:

To: ALL INSPECTORS, SO-FSDO-65, MIA

There is some confusion as to what constitutes acceptable overhaul records for the purpose of meeting the requirements of FAR 121.380. The following discussion outlines the Miami FSDO's office policy on this subject.

A tag or document showing a certification and release after overhaul by a properly certificated FAA entity is the optimum record that is acceptable. There are circumstances where that optimum record is not available. This is especially true when an operator places an aircraft previously operated by a foreign operator on its certificate. All carriers should strive to eventually have all records meet the optimum, but at initial certification, records other than the optimum are acceptable.

There are no clear guidelines as to what is an acceptable record. Knowledge of the previous operator, country of previous certification, type operator, and repair facilities used must be taken into consideration. A specific type of documentation may be acceptable in one case, but because of a change in one of the above conditions, it may be unacceptable in another. The principal inspector must weigh all the available circumstances to make a determination.

Guidance on the subject can be found in Advisory Circular 43-9B, Paragraph 13. While this AC specifically addresses Part 91, it is still a good guideline as to FAA policies. Another reference is the Central Region letter dated 5/11/82, which addresses acceptance of maintenance and overhauls accomplished at facilities not approved by the FAA. Advisory Circular 121.1A also contains information on acceptable records. All inspectors should be familiar with these and other references not specifically mentioned.

The principal inspector assigned to a certificate is responsible to make the determination as to what is acceptable. His experienced judgment and knowledge of the records involved is a major determining factor as to what is acceptable. Once that determination is made, it stands. If another inspector finds facts that, in his opinion, render that acceptance invalid, then the inspector should bring those facts to the assigned principal inspector's attention. The assigned principal inspector will then evaluate the new facts and determine if they warrant a change as to the acceptability of the records. The assigned principal inspector is also responsible to take any corrective action, if warranted.

Thomas B. Rees

EXHIBIT NO. 12

FEB 3 1984

ACTION: Inspection of Continental Airlines, Inc. and/or Texas International Airlines, Inc.

Originally signed by
Clyde DeHart, Jr.

Clyde DeHart, Jr.
Manager, Flight Standards Division, AWP-200

Van Handel:x6065
AWP-205:2150

All Team Members

We have organized inspection teams to conduct an inspection and safety analysis of Continental Airlines, Inc. This analysis will be of the scope and degree necessary to permit an accurate appraisal of the carrier's operational capability and an evaluation of any discrepancies, deficiencies, and noncompliance together with recommendations for corrective action.

It is possible the analysis will disclose areas wherein the carrier is or has been in violation. In cases where immediate action is required, the team leader will report the alleged violation to the appropriate principal inspector as soon as possible to initiate corrective action. All violations will be investigated and documented in accordance with FAA Order 2150.3. The final inspection report will contain all findings, including violations, supporting documentation, and recommended corrective actions sufficient to support any required enforcement action.

Each team member has been given an area of responsibility and general guidance in the conduct of the analysis. Each team leader will be responsible for completing his portion of the report. The team coordinator will be responsible for assembling and compiling the comprehensive final report from the information provided by the team leaders.

The team coordinator, Mr. William C. Withycombe, Acting Manager, Situation Monitor Staff, AWP-205, will be the regional contact for policy and fiscal management. He will have overall responsibility for the conduct of the inspection and will be available at all times to coordinate and assist the team leaders in the execution of their duties.

Thank you for your cooperation.

AWP-205:Van Handel:X6065:2/2/84:paz:FS139Z82
Rev. 2/3/84:WCW:paz

CONCURRENCES
RTG. SYMBOL 205
INITIALS/SIG. WCW
DATE 2/3/84
RTG. SYMBOL 050
INITIALS/SIG.
DATE 2/3/84 ✓
RTG. SYMBOL 200
INITIALS/SIG.
DATE
RTG. SYMBOL
INITIALS/SIG.
DATE
RTG. SYMBOL
INITIALS/SIG.
DATE
RTG. SYMBOL
INITIALS/SIG.
DATE
RTG. SYMBOL
INITIALS/SIG.
DATE
RTG. SYMBOL
INITIALS/SIG.
DATE

2/2/84

FAA Form 1320-14 (7-67)

OFFICIAL FILE COPY

43/6-20

ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WESTERN-PACIFIC REGION

WP 2150.1A

5/21/84

SUBJ: WESTERN-PACIFIC REGION FLIGHT STANDARDS SPECIAL SAFETY INVESTIGATION

1. PURPOSE. This order establishes procedures for Flight Standards Division, Branch, Staff, and Field Offices in the conduct of special safety investigations and the required follow-up action.

2. DISTRIBUTION. This order is distributed to Branch level and above in the Flight Standards Division and standard distribution to all Flight Standard field offices in the Western-Pacific Region.

3. CANCELLATION. WP 2150.1, dated 1/5/81, is cancelled.

4. BACKGROUND. FAA Order 8000.3C, Systemworthiness Analysis Program; Order WE 8000.15, Surveillance, Technical Analysis, and Review; and Handbook WE 1840.1A, Evaluation Program - Flight Standards, have been cancelled. New procedures are needed to support the enforcement program in FAA Order 2150.3 through special safety investigations.

5. PROCEDURES.

a. When unfavorable air carrier, air agency, or other certificate holder safety trend indicators require, the Division, Branch, Staff, or Field Offices may request a special safety investigation.

b. Special safety investigation requests shall be made in writing to the Division Manager, AWP-200, in sufficient detail to identify the problems, subject, and scope of the requested investigation. In an emergency, request may be made orally. The Division Manager will approve or disapprove all special safety investigations.

c. Upon approval, the Situation Monitor, AWP-205, will organize an investigation team consisting of personnel with appropriate technical expertise. The personnel will be furnished from elements of the division and/or other FAA elements, as appropriate.

d. The investigation and associated enforcement investigative reports will be in accordance with FAA Order 2150.3, Compliance and Enforcement Program.

e. Enforcement responsibilities will remain with the field office having jurisdiction unless otherwise authorized by the Division Manager.

Distribution: A-X(FS)-4; A-FFS-0(STD)

Initiated By: AWP-205

#43 2/20

6. CORRECTIVE ACTION REPORTS.

a. The investigation team shall prepare a written report of the corrective action required as a result of the investigation. The report should provide a discussion of any deficiencies in adequate detail to be readily understood by all who may be required to take corrective actions. Where necessary to provide clarity, specific examples and evidence should be provided. The report shall provide sections on findings, discussions, recommended corrective action, conclusions, or whichever is appropriate. If appropriate, the report shall provide reference to support the recommendation.

b. The original of the corrective action report shall be forwarded to the Division Manager within 15 working days after completion of the investigation. A copy shall be provided to the Regional Director and/or the appropriate Washington division upon request.

c. The responsible Branch/Staff and Field Office shall receive one copy of the report within 15 working days after receipt of the report in the division for accomplishment of the required corrective action.

d. In the event that the required corrective action is of an emergency nature, appropriate elements of the report will be transferred to the action office as the situation may dictate.

7. CLOSEOUT REPORT.

a. The field office assigned to accomplish the corrective action will reply, in writing, to the findings and recommendations within 30 days of receipt of the evaluation report. The report closeout shall describe corrective action taken on each specific item. If corrective action cannot be initiated or accomplished within 30 days, a supplemental report shall be provided on a 30 day follow-up until all items are resolved. Items not resolved within 60 days will require justification in the follow-up report. The report shall be addressed to the Division Manager with copies to the appropriate Branch/Staff Manager.

b. When the field office disagrees with the findings or recommendations of the investigation team, a free discussion with the team leader and/or Branch/Staff Manager is encouraged. Unresolved items will be decided by the Division Manager.

c. The closeout report will be reviewed by the Situation Monitor and the appropriate Branch/Staff Manager. Concurrence with the action taken will be indicated by the initials of the reviewing persons on the report.

Clyde DeHart, Jr.
Manager, Flight Standards Division

U.S. GOVERNMENT PRINTING OFFICE 1984-[illegible]

#43/3-20

E

(2) The team must evaluate the adequacy of control and exercise by management by determining how management follows up to ascertain policy and procedural compliance.

(3) Even if the company policy is carried out through the organization, the basic policy or procedure could be wrong.

b. Manual and written procedures. Determine whether or not procedures are set forth clearly and are practical to accomplish.

(1) When analysis of a problem area discloses that existing instructions are inadequate or the systems used in implementing these instructions lack the proper information, detail, or sensibility the procedures should be the prime area of concern.

(2) It is imperative that the operator establish adequate procedures to comply with company policy and FAR requirements.

SECTION III

CONTENTS OF THE REPORT

1. Unsatisfactory Findings:

Unsatisfactory findings should be brief factual statements made as the result of the examining data relating to a system which defines the defects in the operator's programs, systems or procedures. Findings should be precise enough to cover all those areas which are recorded in the findings.

a. Avoid the use of words that imply an all inclusive situation, such as: "The training programs are inadequte."

b. Statements such as "The operator is in noncompliance with FAR 121.0" should not be used as a finding.

2. Discussion: This section should contain all significant factors to support the findings, such as:

a. Facts bearing out the findings

b. The operator's manual of procedures

c. Requirements of FARs

d. Results of interviews with operator's personnel

e. Reference to other findings

f. Changes of management and supervision

g. Interrupted schedules

h. Effect on safety

All of the data used should reflect sound reasoning based on the recorded facts. Sufficient examples should be listed in the documents. They should be listed so they will be easily identified and reviewed by the operator's personnel from their records. They should be of good quality to support legal enforcement action if deemed necessary.

3. Causal Factors: Determine the basis of the discrepancies and the action best suited to the case.

4. Recommendations:

State (at the option of the team) the recommendation designed to correct the basic cause for the deficiencies and discrepancies of the operating program. These recommendations should be based upon appropriate analysis from all causes. The consequence of recommendations should be clearly stated.

5. Alleged FAR noncompliance will identify specific regulations and describe briefly the alleged noncompliance. Substantiated data collected by the team will be attached to each finding. The final report shall contain the necessary supporting evidence in accordance with FAA Order 2150.3, Compliance and Enforcement. The Enforcement Investigative Report shall be complete enough to be forwarded to Regional Counsel, AWP-7, after review by the appropriate principal inspector. Exceptions will be coordinated with the principal inspector for those items that will require additional time to obtain; i.e., violation history, airman information and passenger statements, etc.

TO FS.

6. Distribution of Report: The team coordinator is responsible for producing the final Inspection Report from the information and reports collected from the various team leaders. This report shall be forwarded to the Division Manager, AWP-200, 15 days from the completion of the inspection.

EXHIBIT NO. 13

CONTINENTAL

November 14, 1983

TO: Chief Pilots

SUBJECT: Line Training

As a review and recap of how we must proceed with the upcoming line training, the following is offered:

1. Trainers

   A. All supervisory pilots are, or soon will be, FAA approved Check ~~Pilot~~ AIRMAN These pilots can administer all training to include PC's and Line Checks.

   B. Only line training can be administered by a "Line Check Pilot ." Please determine how many Line Check Pilot you will need for the anticipated line training required in your base. Refer to the Operations Manual page 8-35 and check who is currently flying in your base from the list. If you need additional Line Check Pilots select them from the most highly qualified captains in your base. Please provide me with their names no later than November 20, 1983. While no formal training is required, you should give each pilot a thorough briefing and check list covering his duties, the desired product, standardization, etc. The Line Check Pilot must be used in order to receive the monthly override, while will be $200.00. Provide me with the names on a monthly basis and I will notify Payroll.

   While a Line Check Pilot can only give line training, Bill Armagost, our POI, has stated that for an upgrade captain's FAA line check during his 25-hour IOE, only a Line Check Pilot is required. In other words, legally, a Line Check Pilot can take a pilot through his entire 25-hour IOE including the FAA line check. However, as a policy, I would like an approved Check Pilot (supervisor) to ride with each upgrade captain for at least one leg, preferrably during the FAA line check. If this is not possible, a follow-up line check by a supervisory pilot must be accomplished prior to releasing the new captain. This will help insure a standardized, high quality line training program.

2. Trainees

   A. A first time upgrade captain requires the 25-hour IOE (may be reduced by landings-minimum 13 hours) and FAA/Company line check. A captain transitioning to a new aircraft requires the 25-hour IOE and a Company line check.

B. A first time upgrade F/O and a transitioning F/O require a 25-hour IOE (may be reduced by landings). While the FAR's allows this to be accomplished in the jumpseat, our policy requires all IOE to be accomplished in the F/O seat.

C. All new hire pilots, regardless of past experience, must undergo line training. As a guideline, use the F/O upgrade25-hour IOE minimum for new F/O's and 12 hours for the S/O's. These times can be reduced depending on qualifications and currency. For instance a DC9 F/O who was flying the line at his previous job might only require 12 hours. In no case should an F/O receive less than 12 hours. Please fill out a CAL line check form at the completion of the line training. In the case of F/O's and S/O's, a Line Check Pilot and line check S/O can accomplish the training. However, a supervisory pilot should ride with a new F/O for at least 1 leg as soon as possible.

In summary, please review the FAR covering line training (121.434, page 82A). We are tackling an ambitious training cycle in the next few months. In no case should shortcuts be taken or safety compromised. Please make sure all supervisors and Line Check Pilot understand this. The FAR line training hours are minimum figures. We must train as long as required within reason, to produce a pilot that clearly meets the CAL standards. On the other hand, reducing IOE by landings is acceptable when a pilot's performance warrants it.

Thanks for the hard work so far and the extraordinary effort you will be putting forth as we press on.

Dick

R.S. Hillman

RSH:jes

cc: D. Breeding
B. Lemon
D. Bransford
B. Hill
B. Armagost - FAA

OPERATIONS FINDINGS

ITEM I: CHECK AIRMEN CONTINUED

EXHIBIT NO. 14

Finding # 7*

Continental Airlines has, since a date many years prior to its Chapter 11 action and the subsequent strike, been conducting Operating Experience (IOE) under FAR Part 121. 434 for its Pilots-in-Command (PIC) with so called " Line Check Pilots" who had not received the proper FAA approval to act in the capacity of Check Airmen, contrary to FAR 121. 411 (a)(5) and 121.434 (c)(1)(i). Also, most of these "Line Check Pilots" have not received the training required by FAR 121.413 (a) and (c). Thus, all IOE conducted in this manner for PIC's, as well for First Officers (F/O) while occupying a pilot seat during Operations under Part 121, are, and continue to be, in violation of FAR 121.434(c)(1)(i).

Discussion

A Company Memorandum dated November 14, 1983, (Exhibit 28) describes policy re "Line Check Pilots". Even though these violations have apparently preceeded the November date on this exhibit by many years, it is apparent that as CAL was gearing up for its upcoming expansion and heavy increase in line training, company management realized that it had insufficient Check Airmen, as required by FAR 121.401 (a)(4), to cover the proposed program. Rather than taking steps to comply with that regulation, or seeking relief from it by the Exemption process, they chose instead to use what they perceived as a "loophole" in the language of FAR 121.434(c)(1)(i), (wherein the word Check "Pilot" rather than Check "Airman" is used). They sought, and obtained further reinforcement for their previous and upcoming IOE activities by obtaining a convenient, self-serving and erroneous interpretation of that regulation from the POI. This, in effect, granted them, or so they thought, relief from having to comply with most of the applicable Check Airman requirements regarding training and the full FAA Check Airman approval procedure. Established practice is for CAL to periodically publish lists of "Line Check Pilots" (See Exhibit 26), most of who are untrained in their duties in accordance with applicable FARs. These lists would be automatically accepted without further comment by the POI, thus granting implied FAA approval.

When, the V.P. Flight Operations and the System Chief Pilot were confronted with the impropriety of this procedure on February 16, 1984, their response was to the effect that they have had the FAA's approval for this procedure for years and did not feel that they were in non-compliance. They also added, however, that "if it's wrong, we'll take steps to change it".

OPERATIONS FINDINGS

CHECK AIRMEN CONTINUED

Finding # 7 Continued

This inspection team is unanimous in its astonishment and disagreement with not only the interpretation apparently offered by a succession of previous POIs, but at the lack of any corrective action when this illegal practice was mentioned in previous SWAP Inspections. (Exhibit 29). We hold the interpretation agreed to by these POIs as tantamount to the improper granting of an exemption of major proportions and far reaching consequences.

The company's memorandum is wrong on the subject of "Line Check Pilots". Quite clearly a PIC or a F/O acquiring Line Operating Experience is essentially in a training status, and must be supervised by a Check Airman as indicated by Para 1463, of FAA Handbook 8430.6B (the handbook). This is quite specific on the subject and contains no permissive language. This is universally accepted and understood by the rest of the airline community and amply supported by other National Policy Letters and Notices. For example, see Notice 8430.379 (Exhibit 30). Thus, we believe that the certificate holding office has for a long time been remiss in condoning the situation and consequently has lost control of the CAL Check Airman Program. (See last three lines of Para. 1481 of the Handbook.)

The CAL memorandum (Exhibit 28) is also wrong on the subject of Line Checks. The FAA does not give Line Checks. Those are the responsibility of the company. FAR 121.440(b)(1) is quite specific on that subject. Thus, even when an FAA Inspector is observing a flight under 121.434(c)(1)(ii), the pilot in the right seat must be a fully qualified, trained, and properly FAA approved Check Airman, and may not be merely a so called Line Check Pilot in the sense used by CAL.

The company's memorandum is disturbing in that it shows either a lack of understanding of the FARs or a disregard for them, certainly in so far as Subparts N & O of FAR 121 is concerned. Let there be no mistake that the FAA Act of 1958 places the duty and responsibility to comply with the FARs directly on the air carrier, irrespective of any action taken or not taken by an individual FAA Inspector, or the FAA.

On or around February 25, 1984, members of this team attended a meeting with the POI and company officials in Los Angeles California. Agreement was reached between the company and the POI that the company had until March 25, 1984, to correct the situation but could use "Line Check Pilots" in the interim period while a training program was inititated for them with the proviso that, during this interim period, fully

OPERATIONS FINDINGS

CHECK AIRMEN CONTINUED

Finding # 7 continued

qualified Check Airmen would be used as much as possible, and Line Check Pilots as little as possible. At the time, the team was still in its inspection phase (evaluation not having yet begun) and had not yet had the opportunity to consider the ramifications of the company's memorandum. In the light of subsequent evaluations and numerous other problems in the company's Check Airman and training programs, we feel the FAA should no longer condone a continuing series of violations. We feel this is especially true since these violations are now occuring during a critical period of the company's growth. This expansion in our opinion, has of late been too fast and too ambitious for the check airman resources available to it.

The long term nature and sheer number of the abuses in the company's check airman program does not confer upon them any legitimacy or credence. On the contrary, the situation is long overdue for immediate correction. Since about half of the present pilot force are new hires, and because of the intensity of the present line training in progress, time is of the essence and immediate corrective action is imperative.

Because of this and numerous other abuses in the company's check airman and pilot training programs, CAL does not, in our opinion, presently meet certification standards in those two areas. However, if the use of non-current line check pilots and/or "check airmen" is halted immediately, we believe that the demonstrated level of safety of CAL justifies that it be permitted to remain in operation, and provided also that prompt corrective action is initiated in regard to the discrepancies found in the training program.

Recommendation

Accordingly, the certificate holding office in Los Angeles was notified during a meeting held there on 3/6/84, at which time they were given an advance copy of a draft of this finding, that it was our recommendation that CAL should be advised that all IOE activity involving the use of any Line Check Pilots not fully current in their training requirements, and not having gone through the entire FAA approval process on an individual basis in accordance with all quoted regulations and Handbook requirements, should be halted immediately.

OPERATIONS FINDINGS

ITEM I: CHECK AIRMEN CONTINUED

Finding # 7*

Continental Airlines is using "Check Pilots" for the purpose of FAR 121.434 Initial Line Operating Experience who have not received the Check Airman training as prescribed in FAR 121. 411(a)(4) and FAR 121.413(a)(c).

Discussion

FAR 121.434(c) specifies the method and requirements that a crewmember must comply with in acquiring the operating experience as specified in FAR 121.434. The terms "check pilot" and "check airman" are both used in FAR 121.434 and the accepted industry practice is that they are synonymous. FAA Order 8430.6B, paragraph 1463 states in part, that a PIC or a F/O acquiring Line Operating Experience is essentially in a training status and must be supervised by a check airman.

Continental Airlines has been using "check pilots" for the purposes of FAR 121.434(c) and not "check airmn" as specified in Order 8430.6B.

It appears that Continental Airlines is in non-comliance of FAR 121.434 since they do not train their "check pilots" in accordance with FAR's 121.411 and 121.413 (check airman training programs).

Recommend

The certificate holding office, WP-FSDO-62, should withdraw "check pilot" or "check airman" designations from any individual who has not completed the training as specified in FAR's 121.411 and 121.413 and take the appropriate actions necessary to ensure future compliance.

EXHIBIT NO. 15

Harry A. Langdon
904 Peninsula Ave., (apt 312)
San Mateo CA 94401
Tel;415-342-1746

Jan 5th 1985

Hon. Mrs. E. Dole
Secretary of Transportation
400 7th. Street, S.W.
Washington DC 20590.

Madam Secretary,

The FAA's lack of action in the matter described in this letter is permitting a precedent to stand, which, if left unchallenged, has the potential to bring considerable harm to the public safety in airline operations. My purpose in writing to you is to request your intervention.

The facts of the case center around several findings made by the recent FAA Inspection of Continental Airlines (CALA). I was the FAA,s team leader of the Operations Team during that inspection. (Exh 1). Specifically, our findings had uncovered the use by CALA for many years, of "check pilots" (conducting Initial Operating Experience (ICE) under F.A.R. 121.434) many of who had had neither the training nor the specific FAA approval required by the FARs and FAA Handbook 8430.6b applicable to "check airmen and required by FAR 121.411 (a)(5).

The steps to be followed, according to law and the FAA Handbook, for the appointment of company check airmen are 1)Candidate check airman completes all required training 2)Company writes FAA a letter outlining candidates qualifications and requests FAA approval for candidate to perform certain specific check functions on a specific model airplane.3)An FAA Inspector specifically qualified in the type airplane in question observes candidate performing the checking functions for which authorisation is sought,during the the course of at least one flight.4)Observing FAA Inspector makes recommendation to company's Principal Operations Inspector.5)If recommendation favorable, POI writes company a letter approving candidate, cc of letter to be kept in candidates file.

The original version of our finding #7 (Exh 2) revealed how and why these steps had been totally ignored for years by CALA and the LAX ACDO,and that this office had had no real control of CALA's check airman program. These long term and extremely numerous violations were based on the misinterpretation by CALA, (agreed to by FAA LAX ACDO personnel) of one word in FAR 121.434 (c)(1)(i).

WPRegional HQ personnel had, contrary to the team's concurrence and knowledge, made substantive changes to our finding #7 (Exh. 3 is improperly altered version.) AWP-200 had convened a meeting of all team members(after we had turned in our final report) in which we were informed that the WP Regional Director wished much of what was characterised as "rhetoric" to be removed from the report.There never was any agreement to any changes to our finding #7. I consider these changes an impropriety and a cover-up.

The unanimity of our team in disagreeing with the erroneous interpretation that LAX ACDO personnel had agreed to is a fact, and not "rhetoric."

Whoever did the re-write of finding #7 is quite obviously totally without comprehension of or care for the processes involved in the appointment and surveillance of check airmen and the pivotal role played by these in airline safety. The whole point of our finding has, by design or ignorance, been missed and the finding rendered useless. The basic concept is that company check airmen are essentially appointed, serve and may be removed at the pleasure of the Administrator. This is the one area of FAA surveillance where the FAA maintains, and must continue to maintain absolute control. No erosion should be allowed to creep in here, much as some segments of industry might like it to.Our finding was written so as to give the FAA the ammunition required to come out and state unequivocally what the FAA's position is regarding the use of the words "check pilot" rather than "check airmen" in the quoted regulation. That was the central thrust of our finding and is the main thrust of this letter. Even though CALA reportedly corrected the situation as the result of our original report, the omission of all references to the incorrect interpretation of the FAR and the long term lack of the proper approval process for numerous of their "check pilots", leaves the entire matter unresolved and the door wide open to future such "misinterpretations." The FAA is greviously in error in having failed to take an open stand in the matter, and I ask that it be required to do so now.

Because of these erroneous interpretations, CALA had in fact for many years enjoyed relief from having to comply with extensive segments of the FARs, and that is a statement of fact and not "rhetoric." If such relief does not have the same effect as an exemption, then I'd like to know what else it might be. Since exemptions can only be properly granted after due process, which had in this case been neatly circumvented, was the LAX ACDO to be commended for its long standing condoning of the situation, or is the whole thing to be swept under the ru

In our original version we stated that CALA"s illegal practices re "check pilots" had been reported in previous inspections by other inspectors, but had not resulted in any corrective action. This was a particularly significant fact and not "rhetoric."

It was quite clear to all team members that there was no way the LAX ACDO could, or did know from one day to the next who was a check airman and who wasnt. The conclusion that the LAX ACDO had lost control of the CALA's check airman program was inescapable. Again, fact, not "rhetoric" and amply demonstrated in our original write up.

If a new entrant airline was to submit a proposed operations plan containing the check airman approval procedures in question, it is quite certain that it would not receive the blessings of the FAA or be granted an operating certificate. Thus, in response to the instructions contained in the Inspection Plan supplied by AWP-200 (page 2, para 2a - cc attached) the determination was made that CALA did not at that time meet certification standards in those specific areas. While this may not have been palatable to certain individuals, no other determination was possible - unless we were to have ignored our instructions. However, this determination must not belifted out of context since it was carefully qualified and called for nothing more than a cessation of the illegal practices not

FAA Handbook 8430.6b, the FARs, Washington Directives and Notice 8430.370 (subsequently replaced, expanded and further reinforced by GENOT RWA 3/96, which specifically adresses the question of check airmen conducting IOE (cc attached), are apparantly regarded by the WP Regional Director as nothing more than "rhetoric", since many of these important references and supporting documentation have been conveniently expunged from our original report. The perception is that this is the "good old boy" syndrome hard at work protecting its buddies from the consequences of years of sloppy administration of the CALA certificate.

Our finding #7, in its original form, and the dissertation that went with it was a carefully reasoned examination of all significant factors and was performed in accordance with guidelines supplied by AWP 200. The version of our report, as altered by WP Regional personnel, serves only to foster and perpetuate the sort of incompetence and non feasance revealed by our original unexpurgated version, behind which I am prepared to stand. My anger and frustration is at the lack of integrity and the abuse of authority in the manner in which our original version was mishandled by WP Region HQ personnel.

The FAA is after all, a Government Agency entrusted with the public safety in aviation. Its about time that this agency, when confronted with inadequacies within, learned to bite the bullet and deal with such problems in an open and forthright manner. The public, whose funds the FAA uses, is entitled to know that the FAA is capable of cleaning its house - that it is capable of maintaining order within its ranks at all levels, and that it can correct its own mistakes. Doctoring up a report that it comissioned is not the way to do it.

What would have been so wrong with the FAA coming right out and saying "The interpretation given by FAA personnel was wrong. The correct interpretation is etc. etc. etc....and your future compliance is expected." A clean, simple solution that can be respected by everyone rather than a sleazy massaging of an honest report.

As I leave government service after some 25 years with the FAA, I should like to do so with the feeling that I have contributed something of value. I find it quite impossible to sit idly by, and watch the results of one of the most important and challenging assignments I have recently had - the results of 8 weeks of intensive work by myself and four other highly qualified and experienced inspectors, turned into a pile of garbage by a bunch of bureaucratic wimps.

I shall be very interested to see if you can get your people to get their act together, and respectfully await your response.

Sincerely

HARRY A LANGDON
Aviation Safety Inspector (Retired)
WP Flight Standards District Office
SF

attachments

cc FAA Administrator D. Engen
WP Regional Director H.C. McClure
Manager Flight Standards Div. WP-200
Manager WP-FSDO 10 LAX

U.S. Department of Transportation
Federal Aviation Administration

800 Independence Ave., S.W.
Washington, D.C. 20591

EXHIBIT NO. 16

FEB 8

Mr. Harry A. Langdon
904 Peninsula Avenue
Apt. 312
San Mateo, California 94401

Dear Mr. Langdon:

Thank you for your letter of January 5, 1985, to the Secretary of Transportation. We welcome correspondence from retired employees, especially when they express concerns regarding the agency's policies, practices, and procedures. Your letter gave me great concern, and I initiated a complete review into those areas which you identified.

Although you were a member of the investigating team, I believe that in the interest of clarity it may be useful to review the history of the report prepared as a result of the special inspection conducted by the Western-Pacific Region on Continental Airlines. Hopefully, this review will provide you with the rationale for refining the draft report as well as the disposition of the report findings.

The inspection began on February 6, 1984, in accordance with the February 3, 1984, inspection information package, and the inspection team completed the draft report on approximately March 30, 1984. Soon after the draft report was completed, it was sent to Western-Pacific Regional Office. The report was reviewed for content, format, and an opinion of actions to be taken against Continental Airlines. Following such review, a copy was transmitted to me for review. Upon our review of the draft report, we had a number of specific concerns, which is why we requested that the draft report be reviewed once again and edited as appropriate by the team. To be more specific, we believed that the team had not produced a report which complied with Section III ("Contents of the Report") of the Inspection information package which had earlier been forwarded to all team members. (I recognize that you do not agree with this judgment.) Concern was expressed by us that a number of statements in the draft report were not based on data contained therein, or implied an all inclusive situation by an unwarranted generalization. I know of no one

ther did the re-write

all substantive allegations
supported by documentary
evidence

who sought any changes to the "findings" outlined by the team, nor am I aware of any material shortcomings pointed out in the draft report that were not also raised by the final report. The Western-Pacific Region was asked to refine the report for these reasons. This was accomplished and the final report was completed on April 20, 1984. The report was used as an internal document within the Federal Aviation Administration (FAA) until it was released for enforcement purposes to the public under the Freedom of Information Act in December 1984. [illegible] what enforcement action all recommendations for enforcement action expunged in final report.

Since your principal concern is with the check airman finding, I will discuss that section of the draft report as compared to the final report. The check airman section of the final report did not alter the meaning or intent of the same section in the draft report. The regulations cited in the draft report were all identified in the final report. The recommendations in both reports are similar. NOT SIMILAR - SUBSTANTIALLY WATERED DOWN MOST IMPORTANT REFERENCE OF ALL RE FAA APPROVAL OF CK AIRMEN OMITTED.

As you are aware, the inspection team briefed the Los Angeles (LAX) Flight Standards District Office (FSDO) and Continental Airlines on their findings in the check airman area as soon as they were identified. Continental took immediate action to correct the situation even though they disagreed with the team's interpretation of the controlling regulations. The investigating team, LAX FSDO, Western-Pacific Regional Office, and the FAA headquarters Office of Flight Operations were involved in the decisions concerning the proper corrective action to be taken. Most importantly, Continental had all areas of concern corrected by March 25, 1984, prior to submission of the draft report by the investigating team. WHAT ABOUT FEB 25 & MARCH 25 ? VIOLATIONS OCCURRING & CONDONED BY FAA DURING THAT PERIOD.

I hope the foregoing clarifies the reasons for our requesting the draft report to be reviewed by the team and emphasizes the extent to which all responsible FAA officials were involved in reaching a final decision regarding the findings of the investigating team. I personally believe the final report findings were well written and disposed of in a professional manner. I further believe, as noted above, that the substantive issues raised in the draft report were also raised in the final report, and appropriate corrective action was promptly taken in each case. NOT SO With specific regard to the apparently long-standing misunderstanding by the LAX FSDO personnel of the FAA's position on the meaning of the terms "check pilot" vs. "check airman," I note that as far as we can tell, this was an unique situation. The misunderstanding has--with your help and that of other team members--been raised, thoroughly aired, and clarified. WHAT ABOUT FAA STATEMENTS MADE AT MONDAY PRESS CONFERENCE ? Now, the entire agency is "on the same wavelength" on this issue. I cannot imagine how anyone at LAX FSDO could misinterpret the words in the future, and experience shows that all other offices have not had this problem in the past. Our stand is clear and in agreement with your interpretation. ??

!!?

In your letter, you indicated you have recently retired after 25 years of FAA service. I would like to take this opportunity to thank you for your service to the American People and wish you and your family the best that life can offer during retirement.

Again, thank you for your letter, and if I can be of further service, please do not hesitate to contact me.

Sincerely,

Anthony J Broderick

Anthony J. Broderick
Acting Associate Administrator
for Aviation Standards

EXHIBIT NO. 17

Adm. Donald Engen
Administrator FAA
800 Independence Ave.,
Washington DC 20591

6/21/85

Sir,

Reference is made to Mr. Brodericks Feb 8th. reply to my Jan 5 1985 letter to Secretary Dole. The issue of the illegal use by Continental Airlines of "check pilots" conducting I.O.E. under F.A.R. 121.434 has not been resolved - contrary to Mr. Brodericks letter to me claiming that it has. Those illegal procedures remain unchallenged by the FAA and have in fact been further condoned in a public statement made by the FAA during the press conference recently held in Washington DC concerning the close out of the latest FAA special inspection of Continental. Mr. Broderick wrote the following to me. "Now the entire agency is "on the same wavelength" on this issue. I cannot imagine how anyone at the LAX FSDO could misinterpret the words in the future, and experience shows that all other offices have not had this problem in the past. Our stand is clear and in agreement with your interpretation." (Underlining is mine.)

Please consider that statement vis a vis the following statement made by Mr. WM. Aton, the Ops Team leader of the most recent CALA special inspection.

> "We found that originally they had used check pilots, and this is a kind of a - I dont know - its a misrepresentation of a pilot that gives inital operating experience. What Continental did, what Harry found that - when they fitted into the findings. Continental - we had every one of their check pilots through the check airmen program and brought them right up to speed. Every one of them had the complete, as we call it, 411 and 413 training under 121 - they ran them right through the training, examined by FAA inspectors and approved as full check airmen even though they didnt need it, technically for what they had been doing, which was just giving these initial look-overs for these new captains - they were not giving checks. But just so that .... Continental decided that since they were accused of - er - using check pilots for checks - and they hadnt been - they were just using them for those surveillance rides. They ran them all through school, and when we got there they were all completely qualified. (second underlining supplied by me.)

These "initial look-overs" or "surveillance rides" as Mr. Aton refers to them, are the 25hrs of I.O.E required by FAR 121.434, and for which fully qualified and individually approved CHECK AIRMEN are required according to the interpretation with which Mr. Broderick agrees.

Not only does Mr. Aton's public statement contradict Mr. Brodericks letter to me, it is also not factual. CALA had not been"accused of using check pilots for checks," but for using check pilots to conduct I.O.E. contrary to FAR 121.434 (c)(1)(i) and the LAX FSDO was held remiss for having condoned the situation contrary to the FAR, FAA Handbook 8430.6b,N8430.379 and GENOT 8430.337. Such public statements are hardly indicative of anybody being tuned into to any wavelength or of a "clear stand" that is in agreement with anybody's interpretation. (See Mr. Brodericks Feb 8th letter to me, page 2, last 2 lines.)

At the press conference mention on the prevous page, Mr. McClure made the following statement, concerning our original report - in response to a question about our 1984 Check Airman Finding #7 -
"It was reviewed at several levels as we always do and it was determined that that statement was full of hearsay. The team was asked to reconvene, including Harry, take another look at the report and rewrite it to remove anything that was not factual. Harry objected to that. Consequently he did have a copy of the original draft and he released that." (underlining supplied by me.)

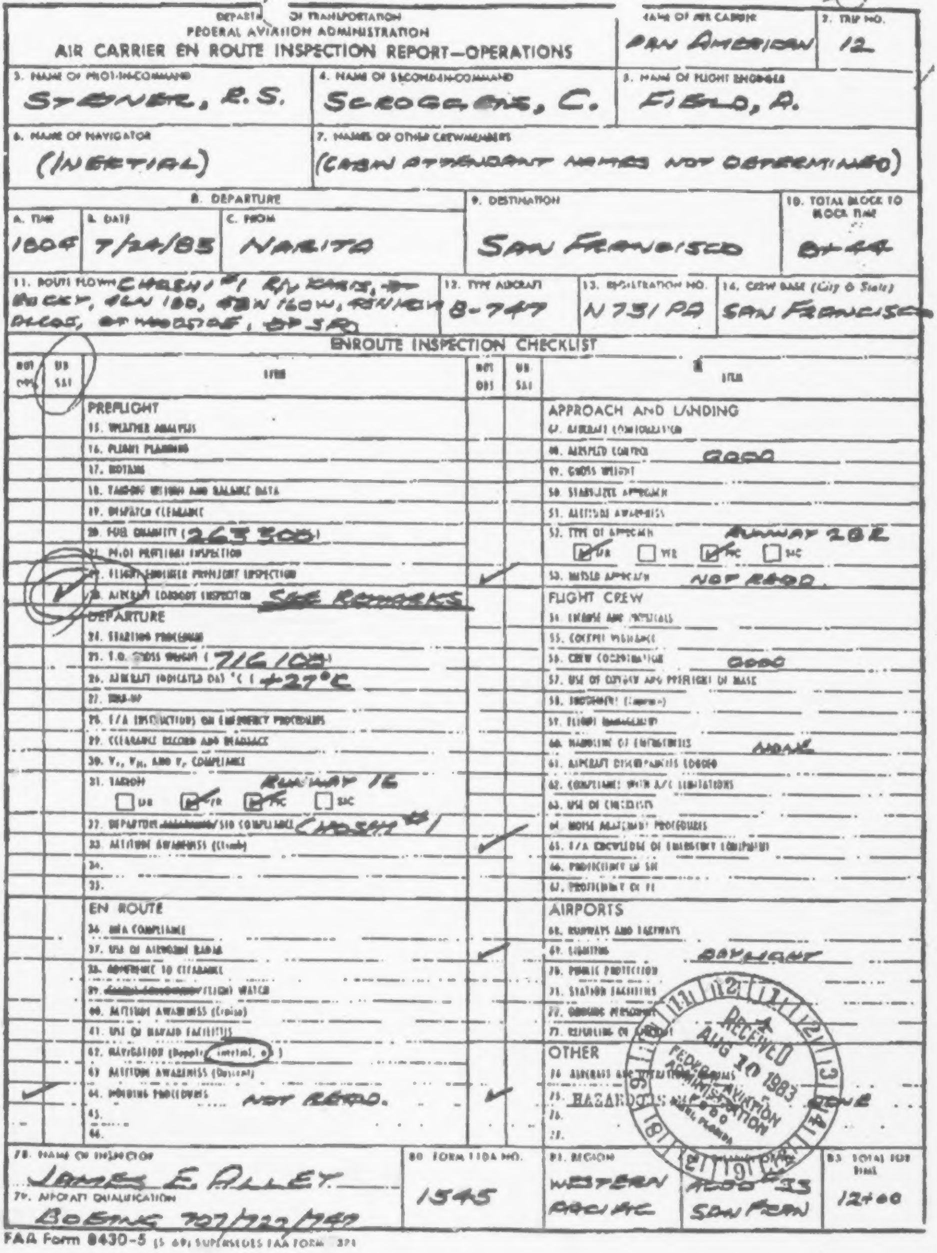
There is no basis whatsoever for Mr. McClure's statement to the media that I had objected to the removal from the report of anything that was not factual - for the simple reason that questions of factuality of the report were never raised - either when we were reconvened for the so called "re-write" or at any other time that I was aware of. Mr. McClure's statement is a slanderous lie for which I demand a public retraction from the FAA.

During every stage of the inspection and the evaluation and write-up that followed, we had maintained the closest liason with Mr. DeHart and Whythicombe at every step of the way. At no time was the validity of any of our findings questioned nor were any of the concerns expressed by Mr. Broderick in page 1 of his letter to me relayed to us - not even when we were asked to do the re-write. Every finding was "brainstormed" by our team and the result was an unanimous team effort in every respect that followed as closely as possible the instructions we had received.

The company had been debriefed by us on the basis of our original unedited report, which all team members thought was the "final" version. The appearance, later, of the stamped word "DRAFT" on our original version was news to all of us. That debriefing was held some considerable time before the April 17th date when we were reconvened for the re-write. Present at the debriefing of the company, were not only all our team members, but Messrs. Devereaux, de Hart, Whythicombe, LAX FSDO management personnel, numerous senior management personnel of Continental. Mr. De Hart had expressed considerable satisfaction ,with our work prior to and shortly after that company debriefing - and all team members, including myself received a letter of commendation from the FAA for our work. When after that we were reconvened to do the re-write none of the concerns raised either by Mr. Mc Clure or Mr. Broderick was relayed to us. All we were told was that the report contained too much "rhetoric" and we were asked to work on that and nothing more. I refused to go along with any changes to check airman finding #7, because of its pivotal and crucial nature, and because it too represented the unanimous views of our team members. Our team members represent the accumulation of some 150 years of experience in aviation and accepted industry practice - the finding was based on a company memorandum which clearly spelled out the company's policies re "check pilots" and gave the source of the misinterpretat of the regulation which had led to the illegal practices - our evaluation was base upon our knowledge of the F.A.Rs, the contents of the FAA Inspectors Handbook (N8430.6b) Washington Memoranda, and N8430.379 and GENOT N 8430.377 dated Jan 1 '

If Mr. McClure considers such documents as "hearsay, or rhetoric or rumour or circu stational eveidence or not factual, I can only suggest that its time the FAA secur the services of management personnel who have some respect for the truth as well as agency directives - and a comprehension of the English language might also be helpful.

EXHIBIT NO. 18



6

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
AIR CARRIER EN ROUTE INSPECTION REPORT—OPERATIONS

1. NAME OF AIR CARRIER	PAN AMERICAN
2. TRIP NO.	12
3. NAME OF PILOT-IN-COMMAND	STEINER, R.S.
4. NAME OF SECOND-IN-COMMAND	SCROGGINS, C.
5. NAME OF FLIGHT ENGINEER	FIELD, A.
6. NAME OF NAVIGATOR	(INERTIAL)
7. NAMES OF OTHER CREWMEMBERS	(CABIN ATTENDANT NAMES NOT DETERMINED)
8. DEPARTURE A. TIME	1804
B. DATE	7/24/83
C. FROM	NARITA
9. DESTINATION	SAN FRANCISCO
10. TOTAL BLOCK TO BLOCK TIME	8+44
11. ROUTE FLOWN	CHOSHI #1 R/V KAGIS, → BECKY, 41N 180, 43N 160W, 45N/140W DUCOS, → WOODSIDE, → SFO
12. TYPE AIRCRAFT	B-747
13. REGISTRATION NO.	N731PA
14. CREW BASE (City & State)	SAN FRANCISCO

ENROUTE INSPECTION CHECKLIST

NOT OBS	UN SAT	ITEM
		PREFLIGHT
		15. WEATHER ANALYSIS
		16. FLIGHT PLANNING
		17. NOTAMS
		18. TAKEOFF WEIGHT AND BALANCE DATA
		19. DISPATCH CLEARANCE
		20. FUEL QUANTITY (263 300)
		21. PILOT PREFLIGHT INSPECTION
		22. FLIGHT ENGINEER PREFLIGHT INSPECTION
	✓	23. AIRCRAFT LOGBOOK INSPECTION SEE REMARKS
		DEPARTURE
		24. STARTING PROCEDURE
		25. T.O. GROSS WEIGHT (716 100)
		26. AMBIENT INDICATED OAT °C (+27°C)
		27. RUN-UP
		28. F/A INSTRUCTIONS ON EMERGENCY PROCEDURES
		29. CLEARANCE RECORD AND READBACK
		30. V_1, V_R, AND V_2 COMPLIANCE
		31. TAKEOFF RUNWAY 16 ☐ VFR ☑ IFR ☑ PIC ☐ SIC
		32. DEPARTURE ~~[illegible]~~/SID COMPLIANCE CHOSHI #1
		33. ALTITUDE AWARENESS (Climb)
		34.
		35.
		EN ROUTE
		36. MEA COMPLIANCE
		37. USE OF AIRBORNE RADAR
		38. ADHERENCE TO CLEARANCE
		39. ~~[illegible]~~/FLIGHT WATCH
		40. ALTITUDE AWARENESS (Cruise)
		41. USE OF NAVAID FACILITIES
		42. NAVIGATION (Doppler, [✓ inertial], etc.)
		43. ALTITUDE AWARENESS (Descent)
✓		44. HOLDING PROCEDURES NOT REQD.
		45.
		46.

NOT OBS	UN SAT	ITEM
		APPROACH AND LANDING
		47. AIRCRAFT CONFIGURATION
		48. AIRSPEED CONTROL GOOD
		49. GROSS WEIGHT
		50. STABILIZED APPROACH
		51. ALTITUDE AWARENESS
		52. TYPE OF APPROACH RUNWAY 28R ☑ IFR ☐ VFR ☑ PIC ☐ SIC
✓		53. MISSED APPROACH NOT REQD.
		FLIGHT CREW
		54. LICENSE AND PHYSICALS
		55. COCKPIT VIGILANCE
		56. CREW COORDINATION GOOD
		57. USE OF OXYGEN AND PREFLIGHT OF MASK
		58. INSTRUMENTS (Comparison)
		59. FLIGHT MANAGEMENT
		60. HANDLING OF EMERGENCIES NONE
		61. AIRCRAFT DISCREPANCIES LOGGED
		62. COMPLIANCE WITH A/C LIMITATIONS
		63. USE OF CHECKLISTS
		64. NOISE ABATEMENT PROCEDURES
✓		65. F/A KNOWLEDGE OF EMERGENCY EQUIPMENT
		66. PROFICIENCY OF SIC
		67. PROFICIENCY OF FE
		AIRPORTS
		68. RUNWAYS AND TAXIWAYS
✓		69. LIGHTING DAYLIGHT
		70. PUBLIC PROTECTION
		71. STATION FACILITIES
		72. GROUND PERSONNEL
		73. REFUELING OF AIRCRAFT
		OTHER
		74. AIRCRAFT AND OPERATIONS MANUALS
✓		75. HAZARDOUS MATERIALS NONE
		76.
		77.

78. NAME OF INSPECTOR	JAMES E. ALLET
79. AIRCRAFT QUALIFICATION	BOEING 707/727/747
80. FORM 110A NO.	1545
81. REGION	WESTERN PACIFIC
82.	ACDO #33 SAN FRAN
83. TOTAL DUTY TIME	12+00

RECEIVED AUG 10 1983 FEDERAL AVIATION ADMINISTRATION

FAA Form 8430-5 (5-69) SUPERSEDES FAA FORM 371

7

84. EN ROUTE DEPARTURES

LOCATION	T.O. GROSS WEIGHT	FUEL QUANTITY	IFR/VFR	PIC/SIC
(NON-STOP) SATISFACTORY FLIGHT CREW PERFORMANCE.				

85. EN ROUTE APPROACHES AND LANDINGS

LOCATION	TYPE OF APPROACH	IFR/VFR	PIC/SIC
(NON-STOP)			

FROM: NARITA TO: SAN FRANCISCO

	FUEL	TIME
1. ACTUAL T/O	262200	1805
2. ACTUAL LAND	30800	0244
3. ACTUAL USED	231400	8+40
4. PLAN USED	229100	8+32
ACTUAL VS. PLAN (3 MINUS 4)	+2300	+8

86. COMMENTS (List by number as appropriate space any remarks to evaluate flight crew) DO NOT LEAVE BLANK

ITEM #23 THE SHEER NUMBER OF DEFERRED MAINTENANCE ITEMS ON THIS AIRCRAFT IS UNSATISFACTORY AND SHOWS THE COMPANY'S APPARENT UNWILLINGNESS OR INABILITY TO REASONABLY MAINTAIN THIS AIRCRAFT.

ON DEPARTING NARITA, THE AIRCRAFT LOG BOOK CONTAINED (37) DEFERRED "OPERATIONAL" MAINTENANCE ITEMS (AND) (24) DEFERRED "NON-OPERATIONAL" MAINTENANCE ITEMS. (THIS DOES NOT INCLUDE ANY CABIN RELATED ITEMS.)

87. CORRECTIVE ACTION TAKEN OR RECOMMENDED I INFORMED WAYNE BAIR, MANAGER SFO ACDO, ON ARRIVING SAN FRANCISCO SUGGESTING A POSSIBLE MAINTENANCE INSPECTOR INSPECTION OF THE AIRCRAFT PRIOR TO IT'S DEPARTURE FOR LONDON LATER IN THE DAY. THIS WAS NOT ACCOMPLISHED. I PHONED ANTHONY FALCO, PAA'S FAA PMI THE FOLLOWING MORNING (7/23). I ADVISED MR. FALCO OF THIS AIRCRAFT'S MAINTENANCE CONDITION WITH A RECOMMENDATION THAT HE LOOK INTO IT AS SOON AS POSSIBLE WHICH HE AGREED TO DO. I WILL FOLLOW-UP WITH A "3112."

88. DISTRIBUTION OF COPIES

(ORIG) NEW YORK ACDO / COPY: MIAMI ACDO

© U.S. Government Printing Office 1979-672-321/104 Region No. 7

ENROUTE INSPECTION REPORT ON PAN AM EXHIBIT NO. 19
BY FAA INSPECTOR JAMES ALLEY

#24

09199

VS-3
Glenn

TELEGRAPHIC MESSAGE

NAME OF AGENCY
DOT/FAA
SO. FLORIDA FSDO-65
P. O. BOX 592015
MIAMI, FLORIDA 33159

PRECEDENCE
ACTION PRIORITY
INFO

SECURITY CLASSIFICATION
UNCLAS

ACCOUNTING CLASSIFICATION

DATE PREPARED
03/03/86

FOR INFORMATION CALL
NAME
ROBERT LLOYD, APM/PAA/B-747
PHONE NUMBER
330-2562

TYPE OF MESSAGE
☒ SINGLE ☐ BOOK ☐ MULTIPLE ADDRESS

THIS SPACE FOR USE OF COMMUNICATION UNIT

MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)

TO: DALE MASON, AVS-3
WASHINGTON, D. C.

PLEASE TRANSMIT THE ATTACHED ~~8~~ 7 PAGES VIA FACSIMILE.

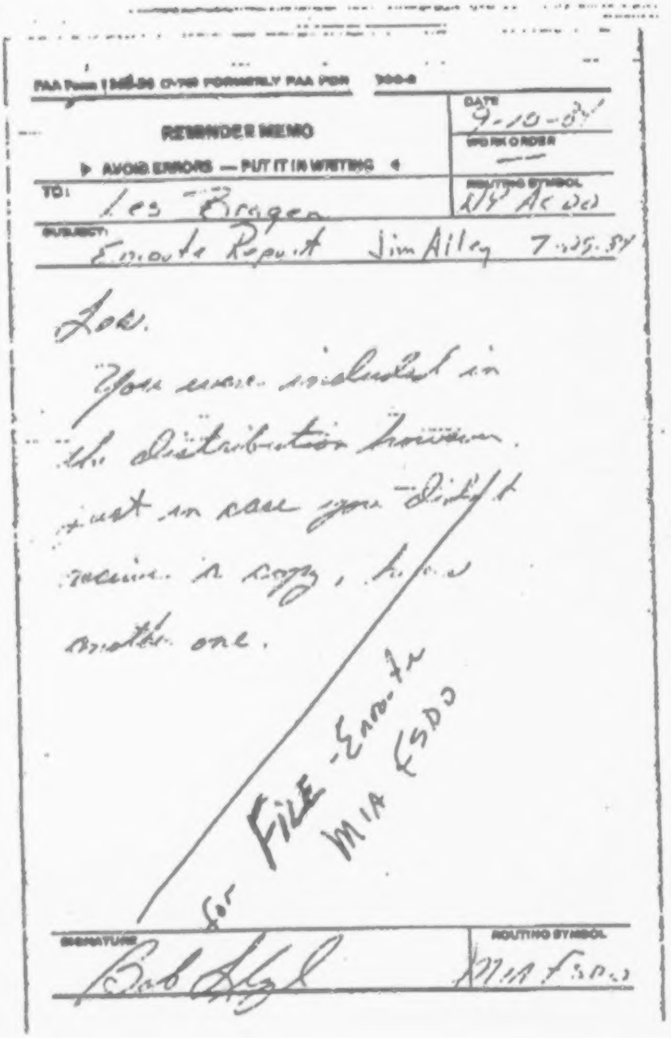
86 MAR 3 19:38

message sent & received 3/3/86
@ 12:00
8-473-5005
8-426-3146 - OK.

PAGE NO.
1

NO. OF PGS.
~~7~~ 8

SECURITY CLASSIFICATION



FAA Form 1360-36 (7-70) FORMERLY FAA FORM 300-2

REMINDER MEMO

▶ AVOID ERRORS — PUT IT IN WRITING ◀

DATE: 9-10-84

WORK ORDER: —

TO: Les Bragen

ROUTING SYMBOL: ATP AC 200

SUBJECT: Enroute Report Jim Alley 7-25-84

Les,

You were included in the distribution however, just in case you didn't receive a copy, here's another one.

for FILE - Enroute MIA FSDO

SIGNATURE: Bob

ROUTING SYMBOL: MIA FSDO

2

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIR CARRIER EN ROUTE INSPECTION REPORT—OPERATIONS

1. NAME OF AIR CARRIER: PAN AMERICAN AIRWAYS	2. TRIP NO.: 830	
3. NAME OF PILOT-IN-COMMAND: ACKERT, T.	4. NAME OF SECOND-IN-COMMAND: GULBRANSEN, G.	5. NAME OF FLIGHT ENGINEER: KAWAMOTO, D.
6. NAME OF NAVIGATOR: (INERTIAL)	7. NAMES OF OTHER CREWMEMBERS: (CREW ATTENDANT NAMES NOT DETERMINED)	

8. DEPARTURE

A. TIME: 2049	B. DATE: 7/29/84	C. FROM: NARITO	9. DESTINATION: HONOLULU	10. TOTAL BLOCK TO BLOCK TIME: 7+16
11. ROUTE FLOWN: CHOSHI #1, CVC, [illegible], [illegible], 30N/160E, 33N/170E, [illegible] 28N/170W, [illegible], [illegible]		12. TYPE AIRCRAFT: B-747	13. REGISTRATION NO.: N725PA	14. CREW BASE (City & State): LOS ANGELES

ENROUTE INSPECTION CHECKLIST

[illegible]	[illegible]	ITEM
		PREFLIGHT
		15. WEATHER ANALYSIS
		16. FLIGHT PLANNING
		17. MANUALS
		18. TAKEOFF WEIGHT AND BALANCE DATA
		19. DISPATCH CLEARANCE
		20. FUEL QUANTITY (197600 LBS.)
		21. PILOT PREFLIGHT INSPECTION
		22. FLIGHT ENGINEER PREFLIGHT INSPECTION INTERIOR ONLY ✓
	✓	23. AIRCRAFT LOGBOOK INSPECTION (SEE REMARKS)
		DEPARTURE
		24. STARTING PROCEDURES
		25. T.O. GROSS WEIGHT (617,500)
		26. AIRCRAFT INDICATED OAT °C (+23 °C
		27. RUN UP
		28. F/A INSTRUCTIONS ON EMERGENCY PROCEDURES
		29. CLEARANCE DELIVERY AND READBACK
		30. V_1, V_R, AND V_2 COMPLIANCE
		31. TAKEOFF RUNWAY 16 ☐ IFR ☑ VFR ☑ DAY ☐ NIGHT
		32. DEPARTURE PROCEDURES/SID COMPLIANCE CHOSHI #1
		33. ALTITUDE AWARENESS (Climb)
		34.
		35.
		EN ROUTE
		36. MEA COMPLIANCE
		37. USE OF AIRBORNE RADAR
		38. ADHERENCE TO CLEARANCE
		39. ~~[illegible]~~/RADIO WATCH
		40. ALTITUDE AWARENESS (Cruise)
		41. USE OF NAVAID FACILITIES
		42. NAVIGATION (Doppler, [✓ Inertial], etc.)
		43. ALTITUDE AWARENESS (Descent)
✓		44. HOLDING PROCEDURES NOT OBSD
—		45.
		46.

[illegible]	[illegible]	ITEM
		APPROACH AND LANDING
		47. AIRCRAFT CONFIGURATION
		48. AIRSPEED CONTROL } VERY GOOD
		49. SINK RATE } VERY GOOD
		50. STABILIZED APPROACH } VERY GOOD
		51. ALTITUDE AWARENESS
		52. TYPE OF APPROACH VISUAL ILS RUNWAY 8L ☐ IFR ☑ VFR ☑ DAY ☐ NIGHT
✓		53. MISSED APPROACH NOT OBSD.
		FLIGHT CREW
		54. LICENSES AND PHYSICALS
		55. COCKPIT DISCIPLINE
		56. CREW COORDINATION
		57. USE OF SYSTEM AND PROFICIENCY IN DATA
		58. KNOWLEDGE (Captain)
		59. FLIGHT MANAGEMENT VERY GOOD
✓		60. HANDLING OF EMERGENCIES NONE
		61. [illegible]
		62. COMPLIANCE WITH F/E LIMITATIONS
		63. USE OF OXYGEN
		64. [illegible]
		65. F/A [illegible]
		66. PROFICIENCY OF SO
		67. PROFICIENCY OF FE
		AIRPORTS
		68. RUNWAYS AND TAXIWAYS
		69. LIGHTING
		70. RADIO FACILITIES
		71. STATION FACILITIES
		72. GROUND PERSONNEL
✓		73. DISPATCH OR COMPANY
		OTHER
		74. AIRCRAFT AND EQUIPMENT (General)
		75.
		76.
		77.

78. NAME OF INSPECTOR: JAMES E. ALLEY	80. INSPECTOR'S ID NO.: 1345	81. REGION: WESTERN PACIFIC	82. DISTRICT OFFICE: FSDO #3 SAN FRAN.	83. TOTAL HRS. FLOWN: 10.0
79. AIRCRAFT QUALIFICATION: BOEING 707/727/747				

FAA Form 8430-5 (5-69) SUPERSEDES FAA FORM [illegible]

[illegible]

3

84. EN ROUTE DEPARTURES

LOCATION	T.O. GROSS WEIGHT	FUEL QUANTITY	IFR/VFR	PIC/SIC
NON-STOP —				

85. EN ROUTE APPROACHES AND LANDINGS

LOCATION	TYPE OF APPROACH	IFR/VFR	PIC/SIC
NON-STOP			

86. COMMENTS (List by number in appropriate space any remarks to evaluate flight crew) DO NOT LEAVE BLANK

ITEM #23 (SEE ATTACHED COMMENTS)

87. CORRECTIVE ACTION [illegible] RECOMMENDED

"BLUE RIBBON" INSPECTION OF PANAM MAINTENANCE DIVISION.

88. DISTRIBUTION OF COPIES

MIAMI ACDO / NEW YORK ACDO

ITEM #23 "AIRCRAFT LOGBOOK INSPECTION"

This aircraft holds the record for the number of deferred maintenance items I've personally observed in over 24 years as an FAA Inspector

"Continued (deferred) items" on departing Narita, Japan included: 32 Operational items, 15 Non-Operational items and 56 Cabin items. Note: Ran out of cabin log pages --- 9 additional cabin items were entered on this flight using PanAm stationery.

Space and time precludes detailing all of these deferred items. However, the following sample of significant operational deferred items should be of interest to those responsible for overseeing PanAm operatio and maintenance:

In general, PanAm now appears to be relying on other carriers to furnish maintenance related "pool parts" on an increasing number of occasions. Many recent instances of using non-PanAm parts on this aircraft. Significant discrepancy items:

Unable to effectively contact cabin stations using cockpit intercom system.

Observer audio selector boxes not fully functional.

APU inop since 7/16/84 --- Blown duct and auto trip discrepancy.

Reverse and reverse transit light inop #2 engine.

Body gear steering deactivated 7/21.

Upper yaw damper inop since 7/11.

Auto-brake disconnected.

"B" auto-pilot inop since 7/24.

No leading edge flap forward panel green position indicating light since 7/25.

No radar trace l/o radar.

#1 hydralic quantity inop.

#1 fuel heat indicator light inop.

#2 Hi-stage bleed light inop.

Since I do not believe that this is an isolated example of PanAm's current aircraft maintenance quality, or lack there-of, I would be hard pressed to consider my family riding on PanAm as a criteria for my feelings regarding the current maintenance practices effecting the condition of their aircraft.

S

Many of the deferred items that PanAm now show in their aircraft maintenance log books result from "parts not in stock" at many stations including their main maintenance bases. Also, aircraft seem to be pushed through main maintenance bases in order to meet flight schedules.

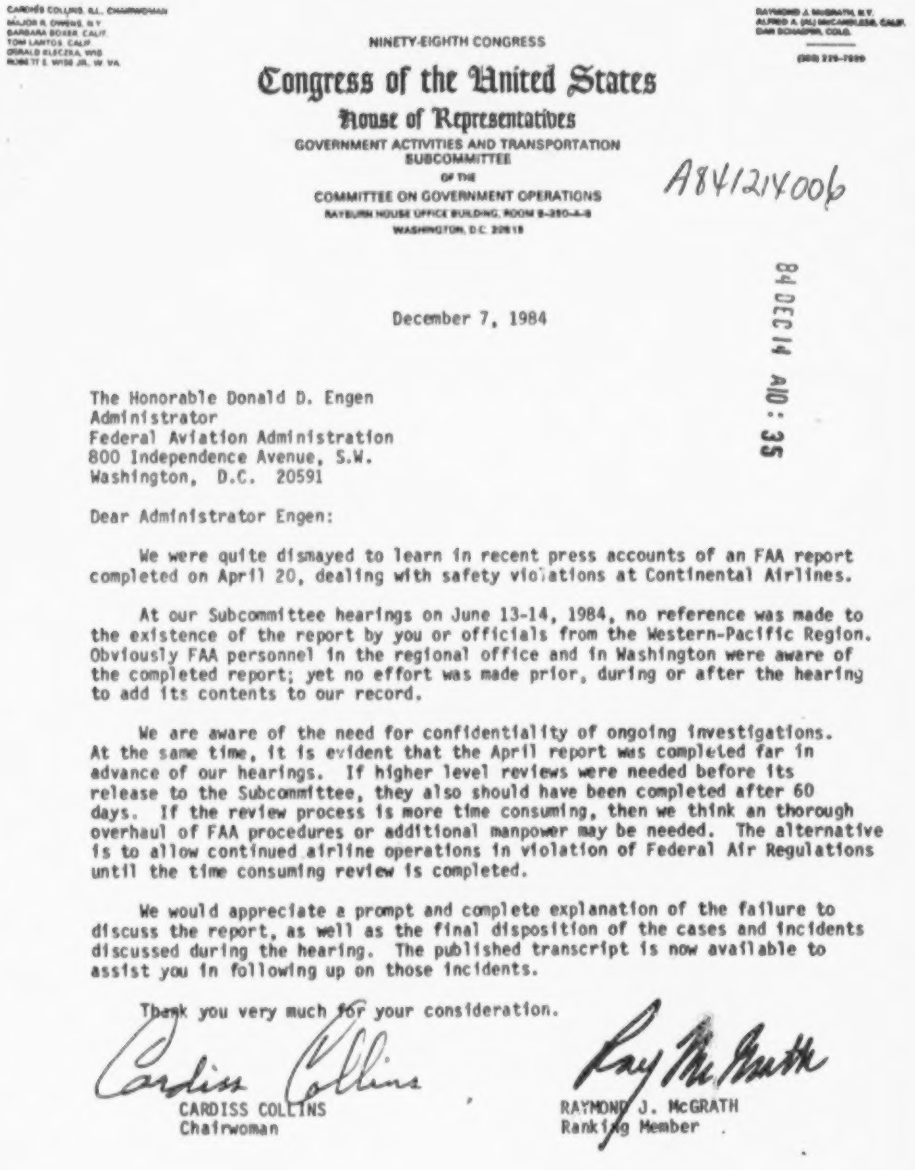
The flight crew of this particular flight indicated that although they knew of many pilots that had previously expressed concern over PanAm's deteriorating aircraft maintenance condition, the Company has taken little or no action to correct or upgrade matters.

If any company ever appeared to deserve a "BLUE RIBBON" inspection, PanAm Maintenance Division should be a prime and immediate candidate.

James E. Alley

James E. Alley
B-747 ACI, SFO FSDO-3

EXHIBIT NO. 20



CARDISS COLLINS, ILL., CHAIRWOMAN
MAJOR R. OWENS, N.Y.
BARBARA BOXER, CALIF.
TOM LANTOS, CALIF.
GERALD KLECZKA, WIS.
ROBERT E. WISE JR., W. VA.

RAYMOND J. McGRATH, N.Y.
ALFRED A. (AL) McCANDLESS, CALIF.
DAN SCHAEFER, COLO.

(202) 225-[illegible]

NINETY-EIGHTH CONGRESS

Congress of the United States
House of Representatives
GOVERNMENT ACTIVITIES AND TRANSPORTATION SUBCOMMITTEE
OF THE
COMMITTEE ON GOVERNMENT OPERATIONS
RAYBURN HOUSE OFFICE BUILDING, ROOM B-350-A-B
WASHINGTON, D.C. 20515

A841214006

84 DEC 14 A10:35

December 7, 1984

The Honorable Donald D. Engen
Administrator
Federal Aviation Administration
800 Independence Avenue, S.W.
Washington, D.C. 20591

Dear Administrator Engen:

We were quite dismayed to learn in recent press accounts of an FAA report completed on April 20, dealing with safety violations at Continental Airlines.

At our Subcommittee hearings on June 13-14, 1984, no reference was made to the existence of the report by you or officials from the Western-Pacific Region. Obviously FAA personnel in the regional office and in Washington were aware of the completed report; yet no effort was made prior, during or after the hearing to add its contents to our record.

We are aware of the need for confidentiality of ongoing investigations. At the same time, it is evident that the April report was completed far in advance of our hearings. If higher level reviews were needed before its release to the Subcommittee, they also should have been completed after 60 days. If the review process is more time consuming, then we think an thorough overhaul of FAA procedures or additional manpower may be needed. The alternative is to allow continued airline operations in violation of Federal Air Regulations until the time consuming review is completed.

We would appreciate a prompt and complete explanation of the failure to discuss the report, as well as the final disposition of the cases and incidents discussed during the hearing. The published transcript is now available to assist you in following up on those incidents.

Thank you very much for your consideration.

Cardiss Collins
CARDISS COLLINS
Chairwoman

Ray McGrath
RAYMOND J. McGRATH
Ranking Member
]

Operations Findings
Item J - Dispatch

Finding #2

The Company presently does not provide the dispatches with any forecast weather maps in certain areas of the South Pacific, therefore, the dispatcher connot be fully familiary with forecast weather on the route to be flown. This is contrary to FAR 121.599(a).

Response

Continental's current practice is to provide the pilot a complete weather package out of Honolulu, and the dispatcher has adequate but less than optimum information. The following new procedures will be implemented:

1. As of April 1, 1984, all pilot reports for the South Pacific (including other airlines) are automatically sent to the international dispatcher hourly.

2. South Pacific route forecasts (ROFORS) for an area bounded by the equator to 45S and from 145W to 145E are currently received (Exhibit J-2). This covers all routes on Continental's South Pacific operation.

Current practices were developed when Continental's office was in Los Angeles and additional charts and sequences were available through the Meterology Department. With the move to Houston and the elimination of Meterology, the area south of Nasdi was lacking in optimum weather information. However, flight crews continued to receive required weather information on all flights.

Action:

Pilot reports are now received and arrangements have been made to receive route forecasts by June 1, 1984. Additionally, with the start-up to HNL-GUM service, significant route weather maps are available for this segment and we have increased our pilot reports and area forecasts for the entire Pacific operation.

JAN 15 1985

(AN IDENTICAL LETTER TO: Raymond J. McGrath)

The Honorable Cardiss Collins
Chairwoman, Subcommittee on Government
Activities and Transportation
Committee on Government Operations
House of Representatives
Washington, D.C. 20515

Dear Madam Chairwoman:

This is in reply to your letter of December 7, 1984, which expressed concern about an FAA investigative evaluation of Continental Airlines and also requested a summary of the disposition of the cases and incidents mentioned at the June hearing before your Subcommittee.

First, let me respond to your concern that we did not discuss our investigative report on CAL during the hearing before your Subcommittee. I would like to assure you that there was no intent to withhold information from the Subcommittee. We worked closely with your staff before the hearing and sought to provide you and your staff with substantial information concerning our efforts to oversee CAL. Insofar as raising the subject matter of the report at the hearing is concerned, the findings contained in the report were investigative in nature, conceivably forming the basis for subsequent enforcement action against CAL, and a final course of action had not been decided upon. Before the hearing, our respective staffs agreed that only "closed," rather than pending, investigative actions would be covered at the hearing.

Let me take a moment to set forth the timing of the report. The drafting of the report was completed on April 20, 1984. As you know, the report contains several hundred pages. We briefed Continental on the information which formed the basis of the report and offered them an opportunity to submit any comments or data they felt we should have as we further assessed the contents of the report and considered the possibility of taking enforcement action against them. In a letter dated May 22, 1984, Continental responded to the information contained in the report. They provided a significant amount of data for us to review, and asked that their data be withheld from disclosure pursuant to the exemption of the Freedom of Information Act dealing with ongoing investigations.

The FAA was still in the process of reviewing Continental's extensive submission at the time of the Subcommittee's hearing. Thus, the process begun by our investigation of Continental was not closed at the time of the hearing, and it would have been premature to discuss an investigation which remained open. In fact, after reviewing the data submitted by Continental, FAA decided not to pursue an enforcement action against the airline.

The possibility that the tentative findings of a pending investigation might create a mistaken impression of the carrier's record, when, in fact, conclusion of that investigation might result in a decision that enforcement action was not warranted, is one of the key reasons why the FAA and the Subcommittee staff agreed to focus on closed investigations for purposes of the hearing. This approach is not unique to the Continental investigation. We are reluctant to raise or discuss any ongoing investigation and it is our practice not to do so--out of concern that an individual's or organization's reputation or record not be unduly tarnished, as well as to avoid prejudicing the outcome of any subsequent legal action we may take against that individual or organization.

One final point I would like to make concerning our investigative practices is that deficiencies found in a carrier's operations during the course of an investigation are brought to the carrier's attention immediately, so that corrective action can be taken at once. We do not let potentially unsafe practices continue while an investigative report is reviewed by FAA management or while we await the submission of explanatory data by the carrier. While review of such reports or submissions is clearly appropriate to determine whether enforcement action is warranted and, if so, the severity of the sanctions to be pursued by the agency, we share your concern that potential safety violations not be allowed to continue during the review process, and we do not allow that to happen.

In response to the second request in your letter, I am enclosing a brief summary of the disposition of the cases and incidents discussed during the hearing before your Subcommittee.

I hope you will find this letter responsive to your inquiry. I look forward this coming Congress to continuing the fine working relationship which has existed between our organizations during this past Congress. An identical letter has been sent to Ranking Member Raymond J. McGrath.

Sincerely,

Donald D. Engen

Enclosure

Continental Airlines Cases and Incidents

(1) ALPA reported that on November 23, 1983, CAL Flight 146, N66725, a Boeing 727-224, lost the #3 engine on takeoff. Federal Aviation Administration (FAA) investigation disclosed that the engine failure actually occurred on December 23, 1983. Engine failure was the result of routine turbine failure. The engine was changed. There was no violation of Federal Air Regulations. Thus no FAA action was taken.

(2) On November 23, 1983, CAL Flight 440 deviated from clearance (altitude) in the vicinity of New Orleans. Conflict with DAL Flight 709 resulted. The Southwest Regional Counsel's Office issued civil penalty letters to the captain and co-pilot of $2,000 and $1,000 respectively. Informal conferences were held on November 1, 1984. The Regional Counsel's Office sent follow-up letters on December 28, 1984, stating that FAA would not compromise the penalties stated in the original civil penalty letters.

(3) On December 28, 1983, CAL Flight 462, a Boeing 727-200, N79750, made a hard landing at LaGuardia Airport, New York, N.Y. An order suspending the captain's pilot certificate for 15 days was issued by the Western-Pacific Regional Counsel's Office on July 18, 1984. The pilot appealed to NTSB and the case is pending before the Board. No hearing has been set as yet. On October 23, 1984, the Regional Counsel's Office sent CAL a $6,000 civil penalty letter. The case is awaiting an informal conference requested by CAL.

(4) On November 18, 1983, CAL operated Flight 437, a DC-9, between Denver and Burbank and return, with the same flight crew. As a result, flight time limitations were violated by CAL. On June 26, 1984, a $1,000 civil penalty letter was sent to CAL. Negotiations between FAA and CAL concerning this matter are still pending.

(5) On November 9, 1983, CAL Flight 435, a DC-9, N3512T, landed on a taxiway at Stapleton International Airport, Denver, Colorado. On August 6, 1984, the Western-Pacific Regional Counsel's Office issued an order suspending the captain's airman certificate for 15 days. The certificate was surrendered, and the case is closed.

(6) On October 6, 1984, CAL Flight 311, a DC-9, N509T, landed at Burbank when the crew did not have the approach plate for the Lynxx One Arrival procedure used. On February 13, 1984, the Western-Pacific Regional Counsel's Office issued a $500 civil penalty letter to the captain. Following an informal conference and as a result of mitigating factors, the civil penalty letter was withdrawn on September 14, 1984. The mitigating factors were that the approach plate was just issued the day before the flight, air traffic control personnel provided the missing information, and safety was not affected.